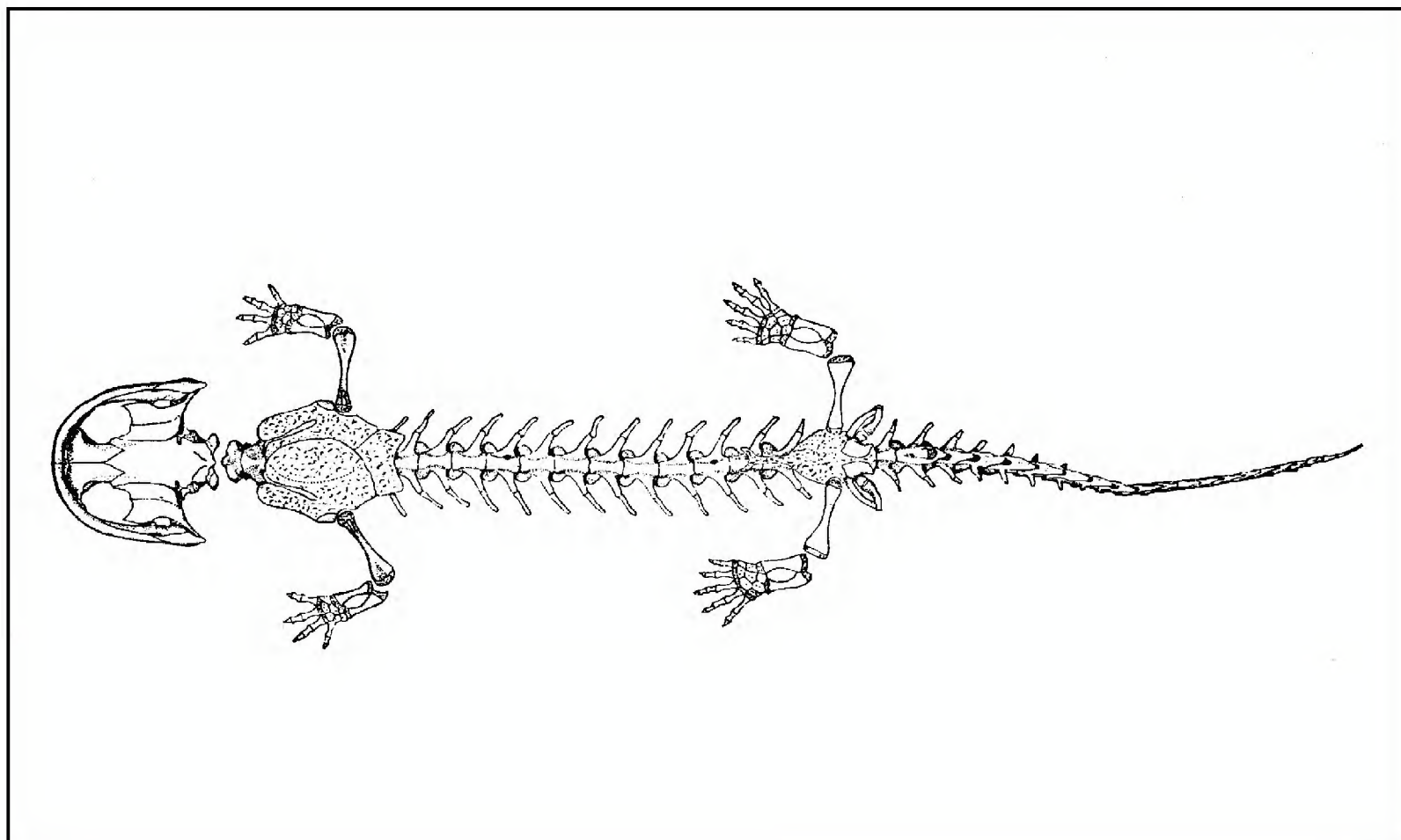

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Food Chain with Anaconda: William Beebe's Flirtation with an Ecological Concept

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About fifteen years back, the head librarian at the small college where I used to teach took it upon himself to create extra space by purging the shelves of old volumes that had not been recently checked out. Among the books that I literally rescued from the trash pile were several titles by William Beebe. I've been reading them at intervals over the years when time permits, sometimes with one of my kids. Generally it's enjoyable going, although Beebe sometimes assumed in his readers a familiarity with the contemporary that does not translate easily across the decades.

I recently finished *Jungle Days* (Beebe, 1925), set in what was then British Guiana. One of the chapters I found most interesting was the first, "A Chain of Jungle Life." Perhaps it is best summarized with the verse that Beebe himself used to begin his essay:

*This is the story of Opalina
Who lived in the Tad,
Who became the Frog,
Who was eaten by Fish,
Who nourished the Snake,
Who was caught by the Owl,
But fed the Vulture,
Who was shot by Me,
Who wrote this Tale,
Which the Editor took,
And published it Here,
To be read by You,
The last in the Chain,
Of Life in the tropical Jungle.*

Several links in Beebe's chain would be of interest to herpetologists. *Opalina* is a genus of protozoan parasites most typically found in the digestive tracts of frogs. In this case, the frog was a smoky jungle frog (*Leptodactylus caliginosus* in Beebe's day), a large foam-nester. The snake was an anaconda (*Eunectes murinus*), and it was attacked by a spectacled owl. Neither survived the struggle that ensued. Today such an encounter would no doubt be written up for *Herpetological Review*. I found no mention of the incident in Beebe's (1946) summary of his field observations of snakes in British Guiana.

Anyone reading this chapter today might immediately

assume that Beebe was illustrating the concept "food chain." This term is so ubiquitous in modern ecological writing that, like the term "predator," it has been appropriated for use in describing social or political interactions in everyday life—one does not want to occupy the bottom of the office food chain, for example. I found myself wondering, however, whether the term had been formally introduced to the ecological literature at the time Beebe wrote this essay. This question was reinforced not much later as I read Quammen's (2003) *Monster of God*, which many readers of this journal might appreciate for its discussion of the saltwater crocodile. Quammen (2003) cited the *Oxford English Dictionary* in support of the conclusion that Elton (1927) was the first to use the term in print (with a hyphen: "food-chain"). One of my references, Carpenter's (1956) ecological glossary, concurred. However, McIntosh (1985) noted that the concept of a food chain was explicitly stated by Semper (1881) and only later formalized and named by Shelford (1913) and Elton (1927) (Shelford used the term "food relations"). At any rate, Beebe seemed to be offering to a general audience a notion that was also being incorporated into the contemporary technical literature.

Of course, Beebe's example is not strictly speaking a food chain as the concept is currently used, but rather a chain of interactions. Both the parasite *Opalina* and the fish feed upon the frog, for example, and *Opalina* inside the frog presumably contribute in a small way to the nourishment of the fish that eats the frog. The spectacled owl was unsuccessful in its attempt to prey upon the anaconda, and the vulture fed upon both the owl and the snake. Of course, feeding relationships in the real world can rarely if ever be accurately described as discrete linear food chains. Rather, food chains are interconnected to form food webs. Moreover, predators often feed on prey from more than one trophic level. That Beebe recognized the inadequacy of linear chains to describe real life situations is evidenced by his brief description in this chapter of a "closed chain," by which flycatchers fed upon young lizards of a species that fed as adults on the flycatchers' nestlings. That Beebe included himself as a link in the chain is understandable, since he did literally kill the vulture, but his extension of the chain to include the editor and the reader seems to anticipate the modern use of the food chain as metaphor for social interactions.

Literature Cited

- Beebe, W. 1925. *Jungle days*. New York: G. P. Putnam's Sons.
- . 1946. Field notes on the snakes of Kartabo, British Guiana, and Caripito, Venezuela. *Zoologica* 31:11-52.
- Carpenter, J. R. 1956. *An ecological glossary*. New York: Hafner Publishing Co. (reprint of 1938 Univ. of Oklahoma Press edition).
- McIntosh, R. P. 1985. *The background of ecology: Concept and theory*. Cambridge, United Kingdom: Cambridge University Press.
- Quammen, D. 2003. *Monster of God: The man-eating predator in the jungles of history and the mind*. New York: W. W. Norton & Co.
- Semper, K. 1881. *Animal life as affected by the natural conditions of existence*. Appleton, NY (not seen; cited by McIntosh [1985]).
- Shelford, V. E. 1913. *Animal communities in temperate America as illustrated in the Chicago region*. The Geographic Society of Chicago, Bulletin No. 5, University of Chicago Press, Chicago, Illinois.

Year 2002 Turtles and Snakes from Chihuahua, Mexico

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Abstract

Selected turtles and snakes collected mostly by JLE, with the help of MJI, in Chihuahua and Durango in the summer of 2002 are summarized. New distributional and/or variational data are provided for 41 taxa. *Conopsis nasus labialis* is synonymized with *C. nasus*; *Trimorphodon wilkinsonii* and *T. biscutatus* are regarded as allospecific; *Procinura* is revived for *Sonora aemula*; *Crotalus basiliscus* is recorded for the first time for Chihuahua; a unique coloration is described for *Masticophis bilineatus*, and second localities for specimens in Chihuahua are recorded for *Lampropeltis triangulum sinaloae*, *Masticophis bilineatus*, *Micruroides euryxanthus australis*, *Procinura aemula*, *Senticolis triaspis intermedia* and *Sympholis lippiens rectilimbus*. The status of the taxa of *Salvadora* in Chihuahua is discussed. There is an altitude record in Chihuahua for *Drymarchon corais rubidus*, and the range of *Masticophis flagellum lineatulus* is extended into northwestern Chihuahua.

Material here reported is in the herpetological collection of Unidad de Biología, Tecnología y Prototipos (UBIPRO), UNAM, to which catalog numbers refer. All material is from Chihuahua unless otherwise stated.

Apalone spinifera emoryi (Agassiz). Ojo de Agua, Estación Guzmán, Laguna de Guzmán (31°13'19.7"N, 107°27'8.2"W), 1449 m. The species is locally well known, and considered abundant when Laguna de Guzmán has water.

Kinosternon flavescens (Agassiz). 10196-7, fields E Ojo Laguna, betw Ejido and lake (29°26'47.8"N, 106°19'34.1"W), 1540 m; 10503-4, Ojo de Agua, Estación Guzmán, Laguna de Guzmán (31°13'19.7"N, 107°27'8.2"W), 1449 m. The heads of these specimens in life were yellow.

Kinosternon integrum (LeConte). 10653, Asequia, N end Batopilas (27°2'27.2"N, 107°43'9.1"W), 435 m.

This specimen has chin barbels and the inguinal scale does not extend anterior to the seam between marginals 5 and 6; it hence does not represent *K. alamosae*, a species known nearby but not yet from Chihuahua.

Kinosternon sonoriense sonoriense LeConte. 10042-3, middle of Cañon de la Madera, Sierra de San Luis (31°13'41.1"N, 108°44'5.5"W), 1638 m; 10046-7, nr Río Piedras Verdes, 1 km S Red Rock (30°22'11.4"N, 108°14'8.7"W), 1682 m.

These specimens conform with the distinctions of this species from *K. hirtipes murrayi*; there is no indentation of the cranial disc, as in the latter subspecies.

The localities represented by all of the *Kinosternon* here reported conform with the ranges outlined in Iverson (1992).

Terrapene nelsoni klauberi Bogert. 9441-3, 9622, mountains around Arroyo El Camuchil (27°2'27.2"N,

107°43'9.1"W), 435 m.

Terrapene ornata luteola Smith and Ramsey. 10460, Rancho Bros. Brown (= Rancho Los Nogales) (31°10'32.6"N, 108°35'9.7"W), 1461 m; 10478, Pradera Janos (31°8'22.5"N, 108°31'8.2"W), 1461 m.

Boa constrictor imperator Daudin. 9408, Arroyo de Dolores, Batopilas (27°1'48.3"N, 107°44'19.5"W), 607 m; 9439, mango field, Batopilas high school (27°2'27.2"N, 107°45'9.1"W), 573 m.

Bogertophis subocularis subocularis (Brown). 10185, km 9, Camargo-Ojinaga (27°40'47.1"N, 104°54'48.2"W), 1409 m; 10189, border of mpio. Coyame, Aldama-Ojinaga (29°21'6.6"N, 105°16'10.7"W), 1416 m.

Both specimens agree with this subspecies in having the vertebral length of the dorsal blotches less by several scales than that of the interspaces.

Conopsis nasus Günther. 9578, 9618-9, 9653, orchard 15 km N Rancho Mojarachi (27°51'46.4"N, 107°55'47.0"W), 2211 m; 9651-2, hot waters, ~13 km N Maguarichi (27°53'58.8"N, 107°56'35.1"W), 1923 m; 9685-6, 2 km S jct San Juanito-Basaseachi and rd to Maguarichi (28°1'8.1"N, 107°48'57.4"W), 2313 m.

The eight specimens in this collection refute the validity of *C. n. labialis* Tanner (1961), contrary to the conclusion of Lemos-Espinal et al. (2000), as was concluded by Goyenechea (1995). The subspecies is supposedly characterized by usually having fewer than 7 supralabials, the norm for *C. n. nasus*. Tanner's data indicate that 79% of 28 sides had fewer than 7, whereas present data show only 25% of 16 sides with fewer than 7. The frequency of fewer than 7 supralabials appears to be relatively high, in Chihuahua, but not high enough (60% in the combined data, Tanner's and the present) to confirm a

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subspecific level of differentiation. None of the present series exhibited the red coloration in life reported by Lemos-Espinal et al. (2000).

Crotalus atrox Baird. 9837, Caseta Galeana, nr Flores Magón (29°35'17.6"N, 106°29'45.2"W), 1475 m; 10184, Ejido San Dionisio, Durango (26°12'9.1"N, 103°41'47.2"W), 1111 m; 10463-4 (skins), Rancho Bros. Brown (= Rancho Los Nogales) (31°10'32.6"N, 108°35'9.7"W), 1461 m; 10551, Ojos de Santa María, Rancho Santa María, NW Laguna Santa María (31°9'21.6"N, 107°19'14.0"W), 1200 m; 10642, km 12, Camargo-Ojinaga (27°41'19.7"N, 104°57'3.1"W), 1380 m.

No. 10551 has large, red, squarish blotches like the coastal phase near the southwestern limit of the range of *C. ruber*. No. 10642 is very pale.

Crotalus basiliscus (Cope). 10614-5, Agua Salada (27°22'54.1"N, 108°28'8.6"W), 527 m. These skins represent the first evidence of the occurrence of the species in Chihuahua. It is, however, known in adjacent Sonora, in the vicinity of Alamos, only ~58 km to the west.

Crotalus lepidus klauberi Gloyd. 10173, km 12.8, Chihuahua-Namiquipa (29°4'30.8"N, 106°26'42.9"W), 2224 m; 10180-3, ruins of Rancho El Mesteño Chiquito, Sierra del Nido (29°29'7.5"N, 106°49'15.6"W), 2224 m; 10407, middle of Cañón del Oso, Sierra de San Luis (31°16'17.7"N, 108°43'7.0"W), 1661 m; 10480, 1.5 km SE Rancho Bros. Brown, Sierra de San Luis (31°8'22.5"N, 108°31'8.2"W), 1455 m.

In two (10180, 10407) the anterior one or two of the dorsal blotches are spot-like, somewhat resembling the spots over the entire body of *C. l. maculosus*.

Crotalus molossus molossus Baird and Girard. 10044, middle Cañón de la Madera, Sierra de San Luis (31°13'41.1"N, 108°44'5.5"W), 1638 m. The color is typically light, the dorsal background color sharply distinct from the color of the black rhombs; the head has relatively little black marking, and the black of the tail extends only a short distance onto body.

Crotalus molossus nigrescens Gloyd. 9623, Rancho Los Llanitos, ~10 km N Maguarichi (27°53'40.8"N, 107°57'13.6"W), 1923 m; 9836, forest at Río Piedras Verdes, 1 km S Red Rock (30°22'11.4"N, 108°14'8.7"W), 1682 m; 10174, km 10.8, Chihuahua-Namiquipa (29°3'58.0"N, 106°25'45.6"W), 1703 m.

All three of these specimens are much darker than the preceding: the dorsal background color is heavily mottled, the dorsal rhombs are narrowly separated, the black color of the tail extends about a tail length onto the body, and the head has extensive black marks. In some the dorsal surface of parts of the body are almost uniformly dark, except for small median light spots between the obscure blotches. The specimens may be intergrades between the two subspecies, as Tanner (1985) suggested; scale characters are more like those of *C. m. molossus*, and the dorsal rhombs are mostly open ventrally. These characters may however be clinal; insufficient data are available to be sure. Our referral of this series to *C. m. nigrescens*

emphasizes the readily observed color and most features of the pattern, which do not appear to be clinal.

Crotalus pricei pricei Van Denburgh. 9506, km 55 Samachique-Batopilas (27°15'35.1"N, 107°31'24.6"W), 2317 m; 9510, km 7.6 San Juanito-Basaseachi (27°58'41.1"N, 107°39'43.0"W), 2402 m; 10179, ruins of Rancho El Mesteño Chiquito (29°29'7.5"N, 106°49'15.6"W), 2224 m.

Crotalus scutulatus (Kennicott). 9225, Cañón de Balleza (26°57'45.7"N, 106°26'9.6"W), 1699 m; 10199, km 90 El Sueco-Casas Grandes (29°54'58.4"N, 107°15'2.4"W), 1558 m.

No. 9225 is from the extreme southwestern limit of the range of the species in southern Chihuahua, at a rather high altitude.

Crotalus viridis viridis (Rafinesque). 10063, entrance Pradera de Janos, km 25 Janos-Agua Prieta (31°2'39.2"N, 108°25'50.7"W), 1392 m.

This species occurs in Chihuahua only in the extreme north. Few localities have been recorded (Lemos-Espinal et al., 1994).

Crotalus willardi silus Klauber. 9508, km 18, Creel-Divisadero (27°39'48.4"N, 107°45'0.6"W), 2314 m; 9509, orchard N Rancho Mojarachi (27°51'46.4"N, 107°55'47.0"W), 2211 m.

These specimens appear to be mature at SVL 342 mm for the female, 372 mm in the male. The latter contained an adult *Sceloporus virgatus*, the female an adult *Peromyscus eremicus*.

Drymarchon corais rubidus Smith. 9507, Bacuseachi, km 41, Samachique-Batopilas, nr La Bufa (27°7'2.5"N, 107°37'6.3"W), 1051 m.

This specimen was taken at a surprisingly high altitude for such a tropical animal, although the determining factor appears to be the fact that the vegetation there is Tropical Deciduous Forest. The snake exhibits the typical reddish ventral markings.

Heterodon kennerlyi Kennicott. 10109, entrance Pradera de Janos, km 26 Janos-Agua Prieta (31°2'39.2"N, 108°25'50.7"W), 1392 m; 10186, km 35, Camargo-Ojinaga (27°48'48.4"N, 104°47'28.7"W), 1373 m; 10191, 10479, pasture E side Ojo Laguna, between Ejido and lake (29°26'47.8"N, 106°19'34.1"W), 1540 m; 10552, Ojo de Agua, Estación Guzmán, at Laguna Guzmán (31°13'19.7"N, 107°27'8.2"W), 1449 m.

The azygous scales vary 1–4, and the canthals are 1–1 in all, agreeing in those respects with the diagnostic features of the species (Smith et al., 2003). No. 10191 is a near-hatchling at TTL 155 mm; its pattern is exceptionally bright. No. 10552 is exceptionally large, 880 mm TTL.

Lampropeltis knoblochi Taylor. 10575, Arroyo del Agua, nr Maguarichi (27°54'45.6"N, 107°58'49.2"W), 2083 m.

This specimen is described and compared with *L. p. pyromelana* in Lemos-Espinal et al. (in press).

Lampropeltis pyromelana pyromelana (Cope). 10172, km 38 Chihuahua-Namiquipa (29°4'38.3"N, 106°36'30.4"W), 2300 m; 11090, km 17.1 Chihuahua-Namiquipa

(29°5'28.7"N, 106°28'51.4"W), 1743 m; 10555, middle of Cañon del Oso, Sierra de San Luis (31°16'17.7"N, 108°43'7.0"W), 1661 m.

The body triads number 38-43; the black borders are fused in 7-32 triads, restricting the red to the sides or venter. The fewest body and tail triads, and the fewest fused triads, occurs in the specimen from the Sierra de San Luis. Tail triads vary 9-14; red is completely lacking in them except in the first in 10172, and six are with red in the other two.

The range of the species occupies the Sierra Madre Occidental to the north, but is limited to the eastern exposures southward, where *L. knoblochi* occupies the western slopes.

Lampropeltis triangulum sinaloae Williams. 9263, Arroyo El Camuchil (27°1'34.1"N, 107°45'44.6"W), 435 m.

This is the second known specimen from Chihuahua (Tanner, 1985, Piedras Verdes). The two known localities are separated by no more than ~25 airline km. The triad rings are exceptionally long, 13 on body. Three triads are on the tail, only the first with red. The anterior snout is mostly light.

Masticophis bilineatus Jan. 9058, 9086, Arroyo El Camuchil (27°1'34.1"N, 107°45'44.5"W), 435 m; 10045, entrance Pradera de Janos, km 48 Janos-Agua Prieta (31°2'39.2"N, 108°25'50.7"W), 1392 m; 10388, 10402, middle Cañon de la Madera, Sierra de San Luis (31°13'41.1"N, 108°44'5.5"W), 1638 m; 10406, middle Cañon del Oso, Sierra de San Luis (31°16'17.7"N, 108°43'7.0"W), 1661 m; 10462, Rancho Bros. Brown (= Rancho Los Nogales) (31°10'32.6"N, 108°35'9.7"W), 1461 m; 10629, Rancho El Jordán (27°23'16.8"N, 108°32'39.6"W), 469 m.

The only locality previously recorded for this species in Chihuahua is Batopilas (Camper and Dixon, 1994), in the extreme southern part of the state. The present series confirms presence of the species in that area, and also its occurrence in the extreme northwest. The range extension eastward from Sonora into northwestern Chihuahua is of ~30 km.

The two from Arroyo Camuchil differ from the others, and from all recorded specimens, by having approximately the anterior half of the venter (excluding head and a head-length on the neck) salmon red. That coloration is not mentioned by Camper and Dixon (1994), and Stebbins (2003) states that the venter is "cream . . . becoming pale yellow toward tail." Whether the red coloration of the Arroyo Camuchil specimens occurs also in southern populations of the species, or is limited to southwestern Chihuahua and perhaps adjacent regions, is unknown.

The lateral striping that characterizes the species (Camper and Dixon, 1994: 32; Stebbins, 2003) is scarcely evident in 9058, and in all present specimens it is limited approximately to the anterior half of the body. The posterior half of the dorsum and sides is unicolor except for the light edges on some scales. Unlike other striped *Masticophis*, the stripes do not extend the full length of the body.

Masticophis flagellum lineatulus Smith. 10482, Rancho de

Bros. Brown, section 1 (31°8'22.5"N, 108°31'8.2"W), 1455 m.

No specimen of this subspecies has been recorded before in the northwestern corner of Chihuahua. The identification of 10482 is problematic, however, partly because it is a juvenile 355 mm TTL, with a spotted pattern, and partly because the locality represented is much closer to localities of record for *M. f. cingulum* in the United States and Sonora than to records of *M. f. lineatulus* in Chihuahua, as depicted by Wilson (1970).

We nevertheless regard the specimen as *M. f. lineatulus* partly because the dorsal transverse bars are but one scale long, separated by interspaces 1–2 scales long, as is characteristic of the *testaceus* exerge of the genus (including *M. f. lineatulus*) rather than the longer spots of the *piceus* exerge (including *M. f. cingulum*), *fide* Wilson (1970: 48). Additional evidence for reference to *M. f. lineatulus* is the presence of a double row of small, round spots on the anterior ventrals, not present in *M. f. cingulum*.

Our identification conforms with the range of *M. f. lineatulus* as depicted in Stebbins (2003), including northwestern Chihuahua as well as southwestern New Mexico and southeastern Arizona.

Micruroides euryxanthus australis Zweifel and Norris. 10648, Batopilas (27°1'34.1"N, 107°45'44.5"W), 435 m.

This is the second recorded specimen of the subspecies from Chihuahua. The only previous report in the state is for the same locality (Zweifel and Norris, 1958). The male has 99 red scales along midline of body, 13 red rings on body, 3 black rings on tail (red present only ventrally), 215 ventrals and 28 subcaudals. All character states conform with known ranges of variation in the subspecies.

Oxybelis aeneus (Wagler). 9285, La Bufa Mine, km 40 Samachique-Batopilas (27°7'22.9"N, 107°36'23.4"W), 1035 m.

This species was previously known only from two localities in the extreme southwestern part of the state (Tanner, 1985; Lemos-Espinal et al., 2002). The altitude record is surprisingly high, but see the discussion of *Drymarchon*.

Pituophis catenifer affinis (Hallowell). 10200, pasture E side Ojo Laguna, between Ejido and lake (29°26'47.8"N, 106°19'34.1"W), 1540 m; 10553, detour to Bismarck mine, Cd. Juárez-Janos (31°15'23.5"N, 107°50'8.0"W), 1410 m; 10554, mouth Cañon de la Madera, Sierra de San Luis (31°12'53.4"N, 108°41'51.9"W), 1612 m; 10556, cornfield NE side Lago los Mexicanos (28°8'28.7"N, 106°55'10.4"W), 2148 m.

No. 10556 was taken at a surprisingly high altitude for the species in Chihuahua, although it is known from even greater heights in Colorado. In both 10554 and 10556 (692 and 357 mm SVL respectively), the black marks on the venter are exceptionally numerous, prominent and widely scattered (not restricted to the sides of the abdomen).

Procinura aemula Cope. 9380, 9435, 10647, Batopilas and Arroyo El Camuchil (27°1'34.1"N, 107°45'44.5"W), 435 m; 10610, Agua Salada (27°22'54.1"N, 108°28'8.6"W), 536 m.

This strange species is known from little more than a dozen specimens, only one of which is from Chihuahua, at the type locality, Batopilas. All others are from the vicinity of Alamos and Guirocoba, Sonora (Bogert and Oliver, 1945).

The variation described by Nickerson and Heringhi (1966) of specimens from Sonora is much greater than in the present series, suggesting geographic variation. All four of ours are banded throughout the body, but the number of bands varies 6½–9. In three the black-white-red-white-black sequence (BWRWB) holds throughout most of the body, although the borders of the red rings are melanized to different degrees. The arrangement in one (10610) is more irregular, mostly BWBRBW. Invariably the tip of the snout is light, followed by a black cap on the rest of the dorsal surface of the head, then a light nuchal collar preceding a red band. Ventral surfaces of the body are black to various degrees, except on the head and neck, always unpigmented. The tail has 2–3 triads. Keels are present about as far forward on the body as the length of the tail and become spinelike posteriorly on the tail.

Cope (1879) placed this species in the genus *Procinura*, both new — a combination maintained in many works up to the present time. Although Stickel (1943), in his monographic study of *Sonora*, accepted *Procinura* for *aemula*, Bogert and Oliver (1945) placed the species in *Sonora*, noting that retention of *Procinura* would obscure the relation of *aemula* to *Sonora*. That arrangement has been accepted by numerous subsequent authors, although not all. Stickel (1943) was quite aware of the relationship, but still regarded the genus as valid.

On the contrary, it can be argued that inclusion of *aemula* in *Sonora* obscures its remarkably distinct features (keeled and spinose rear dorsal and caudal scales, extensive variability of a tricolor ringed or banded pattern, and pigmentation of ventral surfaces). The objective of taxonomy is to reflect differences as well as similarities. Conventionally differences may weigh more heavily than similarities, as for example in the separation of *Masticophis* from *Coluber*. Stability is not necessarily involved, inasmuch as *Procinura* continues to be recognized as valid in numerous works, including the dates at least of 1956(2), 1960, 1987, 1988(2), and 1989.

Salvadora deserticola Schmidt. 9284, Arroyo El Camuchil (27°1'34.1"N, 107°45'44.5"W), 435 m; 10403, middle Cañón de la Madera, Sierra de San Luis (31°13'41.1"N, 108°44'5.5"W), 1638 m; 10461, Rancho Bros. Brown (=Rancho Los Nogales) (31°10'32.6"N, 108°35'9.7"W), 1461 m; 10630, Rancho El Jordán (27°23'16.8"N, 108°32'39.6"W), 469 m.

The two specimens from southwestern Chihuahua have a normal pattern, unlike the one reported from there by Lemos-Espinal et al. (2002). All fall within the known geographic range of the species.

Salvadora grahamiae grahamiae Baird and Girard. 10175, km 5.5 Chihuahua-Namiquipa (29°4'46.7"N, 106°23'37.5"W), 1627 m.

The distribution of this species in Chihuahua has been incorrectly portrayed in recent guides, for lack of critical

information. Conant and Collins (1998) and Stebbins (2003) indicate almost identical isolated patches of occurrence of both *S. g. grahamiae* and *S. g. lineata* in Chihuahua. The present specimen confirms the presence of *S. g. grahamiae* in the central part of the state, and Lannutti (2000) mapped it throughout most of the state east of higher elevations of the Sierra Madre. Concomitantly, he mapped the range of *S. g. lineata* south and east of the state. He knew (pers. com.) of no documented record for Chihuahua of that subspecies.

No. 10175 agrees with the distinctive characters of *S. g. grahamiae* in having no lateral dark line, and posterior chin-shields in contact; the dorsolateral dark lines are solid black, rather than light-flecked as in *S. deserticola*. However, it has 9-9 supralabials, as in *S. deserticola*. It is apparently a rare variation in *S. g. grahamiae*.

According to Lannutti (2000), the several records of *S. bairdii* Jan for Chihuahua, southwestern Sonora and northern Sinaloa are referable to *S. g. grahamiae*, and those from Durango northeastward are *S. g. lineata*. He concluded that *S. bairdii* is limited to the transvolcanic zone, at the southern edge of the plateau. All records for Chihuahua of that species are incorrect.

Senticolis triaspis intermedia (Boettger). 10641, Cajón Pinto (27°23'24.7"N, 108°30'17.8"W), 527 m.

This is only the second known locality for the species in Chihuahua. It is from the same general area as the other, Mojarachi.

Sympholis lippiens rectilimbus Hensley. 10622, El Limón (27°24'1"N, 108°32'36.0"W), 451 m; 10649, Batopilas (27°1'34.1"N, 107°45'44.5"W), 435 m.

At only one other locality (Urique) has this species been recorded from Chihuahua (Hensley, 1966; Tanner, 1985). It conforms in all respects with the original description of the subspecies, having the rear edge of the black head cap straight, only one labial entering orbit, and lacking loreals.

Tantilla nigriceps Kennicott. 10183, Ejido San Dionisio, Durango (26°12'9.1"N, 103°41'47.2"W), 1111 m.

This record is within the known range of the species.

Thamnophis cyrtopsis cyrtopsis (Kennicott). 9502, km 65 Samachique-Batopilas (27°15'11.7"N, 107°31'24.6"W), 2315 m; 9504, Quirare (27°9'35.7"N, 107°33'40.4"W), 2250 m; 9577, orchard N Rancho Mojarachi (27°51'46.4"N, 107°55'47.0"W), 2211 m; 9598, 2 km S jct San Juanito-Basaseachi with road to Maguarichi (28°1'8.1"N, 107°48'57.4"W), 2313 m; 9848, forest at Río Piedras Verdes, 1 km S Red Rock (30°22'11.4"N, 108°14'8.7"W), 1682 m; 10132-3, 1.5 km W Las Varas, hwy Santa Clara (29°21'53.7"N, 106°36'21.0"W), 1569 m; 10385-7, middle of Cañón de la Madera, Sierra de San Luis (31°13'41.1"N, 108°44'5.5"W), 1638 m.

The most reliable distinguishing feature of this subspecies from *T. cyrtopsis collaris*, in the present material, is the persistence posteriorly of the sharply defined borders of the lateral light stripe (poorly defined or absent in the latter). The nape

blotches are usually but not always fused in the latter subspecies (see its account), usually separate in *T. c. cyrtopsis* (in only one, 9504 are they fused). The difference between the two subspecies in supralabial bars, reported by Lemos-Espinal et al. (2002), is refuted in the present material; the bars are regularly present throughout the supralabial series in both subspecies.

The altitude range is 1569–2315 m. Nos. 9504 and 9598 have exceptionally bright stripes; the sides of the body are very dark, obscuring the blotches.

Thamnophis cyrtopsis collaris (Jan). 9281-2, 9247, 9313, 9329-30, 9366, 9404, 9406, 9421-6, 9459-60, 9505, 10644, 10655-7, Arroyo El Camuchil and Batopilas (27°1'34.1"N, 107°45'44.5"W), 435 m; 9362-3, Satevo (26°59'25.8"N, 107°45'52.0"W), 567 m; 10624, Rancho El Jordán (27°23'16.8"N, 108°32'39.6"W), 469 m.

This is a low-altitude subspecies (435-567 m in present material) in Chihuahua, widely separated by altitude from *T. c. cyrtopsis* (q.v.) at 1569-2315 m in present material. The nuchal blotches are usually fused, although vestiges, both dim and bright, of the median light line are evident in the postparietal area in nine, and there is a complete separation in one.

Thamnophis eques megalops (Kennicott). 9497-9500, 1 km N Humira (27°25'43.0"N, 107°29'24.6"W), 1906 m; 10557, Presones de la Capilla de los Remedios, Lago Los Mexicanos (28°7'7.5"N, 106°56'28.9"W), 2165 m; 10586, km 114, Creel-Guachochi (27°35'32.6"N, 107°32'56.9"W), 2139 m.

All have the dark spots in the upper dorsolateral row readily distinguishable from each other. The medial stripe varies in width; it usually involves more of the paravertebral rows than in *T. e. virgatenuis*, but in some the difference is negligible.

Thamnophis eques virgatenuis Conant. 9128, km 209.5 Creel-Guachochi (27°5'23.1"N, 107°14'59.0"W), 2350 m; km 215 Creel-Guachochi (27°3'46.7"N, 107°12'1.0"W), 2331 m; 9706-7, 9709-12, km 62 San Juanito-Basaseachi (28°9'25.3"N, 108°6'26.9"W), 2320 m.

In neither specimen from km 209.5 and 215 is the median stripe limited to the vertebral row; disconnected light edges occur on the paravertebral rows, but do not quite reach the keels on those scales. The spots in the upper dorsolateral row are largely fused, scarcely distinguishable from each other. Those in the lower row are separated by no more than one scale length.

In the other series, the part of the median stripe on the paravertebral rows is continuous in some, discontinuous in others, but in all they reach the median keel of each scale. The dorsolateral spots are much the same as in the others. All are from somewhat higher altitudes (2320–2350 m) than *T. eques megalops* (1906–2165 m).

On the basis of available material, the validity of *T. eques virgatenuis* is questionable.

Thamnophis errans Smith. 9708, km 82, San Juanito-Basaseachi (28°9'25.3"N, 108°6'26.9"W), 2320 m; 10581, km 7.6 San Juanito-Maguarichi (27°58'41.1"N,

107°39'43.0"W), 2402 m.

These two high-altitude specimens, sympatric with *T. eques virgatenuis* (no. 9708), very closely resemble *T. cyrtopsis collaris*. That they are not the same is assured by their 7 supralabials (vs 8), and an altitude difference: 2320-2401 m (vs 435-567 m). They conform with the description of *T. errans* in Rossman (1996), and their identification has been confirmed by Alan deQueiroz (pers. com.). However, they agree in all respects of pattern and coloration, including the critical character of poorly defined lateral light lines posteriorly. A difference presumably exists (Rossman, 1996) in the all-black tongue of *T. errans* vs the red-tipped tongue of *T. cyrtopsis* — a character that cannot reliably be checked in preserved specimens (Webb, 1976).

The extensive similarity of the present *T. errans* and *T. cyrtopsis collaris* leads us to assume a close relationship between them. At least deQueiroz et al. (2002) concluded on the basis of mtDNA analyses that *T. errans* is not closely related to *T. elegans*, as has long been thought (Webb, 1976). At the same time they showed that, based on the Durango sample they tested, *T. errans* is only remotely related to *T. cyrtopsis*.

Thamnophis melanogaster chihuahuaensis Tanner. 9348, Satevo (26°59'25.8"N, 107°45'52"W), 567 m; 9436-7, 9457-8, 10643, 10645-6, Arroyo El Camuchil and Batopilas (27°1'34.1"N, 107°45'44.5"W), 435 m.

This species differs from the sympatric *T. validus* in almost always having 2-1 or, usually, 2-2 preoculars (vs 1-1, seldom 2-1); the present specimens have 2-2 except one with 2-1. Rossman (1996) indicated that in *T. validus* the prefrontal length/frontal length, and frontal length/parietal length ratios average 77% and 71% respectively in *T. validus*, 65% and 81% in *T. melanogaster*; the present specimens average 67% and 77% respectively, thus conforming most closely with the latter taxon. The averages of eye diameter/frontal length and prefrontal length/internasal length ratios are more like those in *T. validus*, but we regard them as insignificant because they involve measurements that cannot be taken with reasonable accuracy.

Trimorphodon wilkinsonii Cope. 10176, km 4.5 Chihuahua-Namiquipa (29°5'11.2"N, 106°22'25.9"W), 1609 m.

This specimen was taken near the southern and western known limit of the range of the subspecies. It has no evidence of the typical (in other *T. biscutatus*) inverted V-shaped light and dark mark on head, and no interocular light or dark band. There is an isolated black mark on frontal and one near the anterior end of each parietal scale. The dorsal blotches on over the posterior half of the body are no longer than four scales at midline, and a small, dim central light area is present only on the anterior, larger blotches.

The relationship of this species is clearly with *T. biscutatus*, of which in recent years it has been regarded as a subspecies. However, relationship per se does not necessarily mean conspecificity (see discussion of *Procinura aemula*). This taxon is unique in the entire, very widely distributed *biscutatus* complex in lacking the inverted V-shaped mark on the head, and

the virtual elimination of the light centers of the dorsal blotches. There is a significant gap between the known ranges of *vilkinsonii* and *T. b. lambda*, its closest relative (Scott and McDiarmid, 1984). Furthermore, *vilkinsonii* is the only population of the complex documented to be established east of the continental divide throughout its range from Central America to the United States. For these reasons we regard *T. biscutatus*

and *T. wilkinsonii* as allospecific.

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Literature Cited

- Bogert, C. M., and J. A. Oliver. 1945. A preliminary study of the herpetofauna of Sonora. Bull. Am. Mus. Nat. Hist. 83:301-425.
- Camper, J. D., and J. A. Dixon. 1994. Geographic variation and systematics of the striped whipsnakes (*Masticophis taeniatus* complex: Reptilia: Serpentes: Colubridae). Ann. Carnegie Mus. 63:1-48.
- Conant, R., and J. T. Collins. 1998. A field guide to reptiles and amphibians of eastern and central North America. Third edition, expanded. New York: Houghton Mifflin.
- Cope, E. D. 1879. Eleventh contribution to the herpetology of tropical America. Proc. Acad. Nat. Sci. Philadelphia 18: 261-277.
- DeQueiroz, A., R. Lawson and J. A. Lemos-Espinal. 2002. Phylogenetic relationships of North American garter snakes (*Thamnophis*) based on four mitochondrial genes: How much DNA sequence is enough? Mol. Phylog. Evol. 22:315-329.
- Goyenechea Mayer-Goyenechea, I. 1995. Revisión taxonómica de los géneros *Conopsis* Günther y *Toluca* Kennicott (Reptilia: Colubridae). México, D. F. UNAM. MA Dissertation.
- Hensley, M. M. 1966. A new subspecies of the Mexican snake, *Sympholis lippiens* Cope. Herpetologica 22:48-55.
- Iverson, J. B. 1992. A revised checklist with distribution maps of the turtles of the world. Richmond, Indiana: Privately printed.
- Lannutti, D. 2000. Morphological variation in *Salvadora grahamiae* and related taxa (Serpentes: Colubridae). El Paso, Texas, Univ. Texas M.S. dissertation.
- Lemos-Espinal, J. A., D. Auth, D. Chiszar and H. M. Smith. 2002. Year 2000 snakes from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 37:51-55.
- Lemos-Espinal, J. A., D. Chiszar and H. M. Smith. 1994. The distribution of the prairie rattlesnake (*Crotalus v. viridis*) in Mexico. Bull. Maryland Herp. Soc. 30:143-148.
- Lemos-Espinal, J. A., D. Chiszar and H. M. Smith. In press. Knobloch's king snake (*Lampropeltis pyromelana knoblochi auctorum*) a species. Bull. Maryland Herp. Soc.
- Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2000. New distributional and variational data on some species of snakes from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 35:19-24.
- Nickerson, M. A., and H. I. Heringhi. 1966. Three noteworthy colubrids from southern Sonora, Mexico. Great Basin Naturalist 26:136-140.
- Rossman, D. A. 1996. Taxonomy and evolution. Pp. 9-52. In: D. A. Rossman, N. B. Ford and R. A. Seigel. The garter snakes: evolution and ecology. Norman, Oklahoma: Univ. Oklahoma Press.
- Scott, N. J., Jr., and R. W. McDiarmid. 1984. *Trimorphodon biscutatus*. Cat. Amer. Amphib. Rept. 353.1-353.4.
- Smith, H. M., D. Chiszar, C. M. Eckerman and H. D. Walley. 2003. The taxonomic status of the Mexican hognose snake, *Heterodon kennerlyi* Kennicott (1860). J. Kansas Herp. Soc. (4):17-20.
- Stebbins, R. C. 2003. A field guide to western reptiles and amphibians. Third edition. Boston: Houghton-Mifflin.
- Stickel, W. H. 1943. The Mexican snakes of the genera *Sonora* and *Chionactis*, with notes on the status of other colubrid genera. Proc. Biol. Soc. Washington 56:109-128.
- Tanner, W. W. 1961. A new subspecies of *Conopsis nasus* from Chihuahua, Mexico. Herpetologica 17:13-18.
- . 1985. Snakes of western Chihuahua. Great Basin Naturalist 45: 615-676.
- Webb, R. G. 1976. A review of the garter snake *Thamnophis elegans* in Mexico. Los Angeles County Mus. Nat. Hist. Contr. Sci. (284):1-13.
- Wilson, L. D. 1970. The coachwhip snake, *Masticophis flagellum* (Shaw): Taxonomy and distribution. Tulane Studies Zool. Bot. 16:31-99.
- Zweifel, R. G., and K. S. Norris. 1955. Contributions to the herpetofauna of Mexico: Descriptions of new subspecies of snakes (*Micruroides euryxanthus* and *Lampropeltis getulus*) and miscellaneous collecting notes. Am. Midl. Nat. 54:230-249.

**Book Review: *A Complete Guide to Reptiles of Australia* by Steve Wilson and Gerry Swan
2003. Reed/New Holland Publishers, 14 Aquatic Drive, Frenchs Forest, NSW, 2086, Australia
Soft cover, 100s of color photos. 480 pp. ISBN 1-87633472X. AU\$50 (approximately US\$35)
[Published in the U.S. by Princeton University Press under the title *Reptiles of Australia*]**

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Australia remains a new frontier for herpetologists. New species are being named every year and this includes large and glamorous forms such as snakes and big lizards. Every few years another “stamp catalogue style” book listing and identifying all known species appears on the market. Each seems to have yet more new species, subspecies and variants than the book that preceded it. The latest in this progression is *A Complete Guide to Reptiles of Australia* by Steve Wilson and Gerry Swan.

Before this most recent book, the “Bible” on Australian reptiles was the series of large books by Hal Cogger, seen in its most recent incarnation in 2000, and already as of 2003 unavailable. Cogger’s first edition came out in 1975 and represented a quantum leap in terms of the information available on Australian reptiles. It listed all known species in a clear and concise format as no other book had done before. Up until then the “Bible” had been Eric Worrell’s *Reptiles of Australia*, which by comparison to Cogger’s new work, looked decidedly rough and ready.

In 1996, Cogger upgraded his book to have color photos of all Australian species adjacent to the text for each. This made his book more user-friendly and a far better reference source. This step had to be taken as the shine had been taken from Cogger’s book by three other books that had recently appeared which presented coverage of Australian reptiles in such a manner. These books were my own, *Australian Reptiles and Frogs* (1989), which also delved heavily into areas such as captive husbandry, conservation and so on; Harry Ehmann’s *Encyclopedia of Australian Animals: Reptiles* (1992); and Wilson and Knowles’ *Australia’s Reptiles: A Photographic Guide to the Terrestrial Reptiles of Australia* (1988).

When Cogger upgraded his own book in 1996 to match the format of the other three, his book once again became the “stamp catalogue of choice” because it had the most recent coverage and hence widest range of species, as well as his excellent identification keys, which none of the other books had. The 2000 edition cemented this position as by then the other books were about a decade old and looking decidedly dated.

Cogger’s books were however still losing their shine. When they first appeared in the 1970s the coverage of known Australian species was pretty much complete. In 1983 Cogger et al. published a *Zoological Catalogue of Australia (1) Amphibia and Reptilia*, which listed all Australian reptile taxa, junior synonyms and the like. Richard Wells seized upon this template as a basis to fill in all the blanks and the following year published a series of descriptions naming the hitherto

unnamed regional variants. He then plugged holes in his own coverage in a second paper, the result being hundreds of taxonomic additions and changes to Australia’s herpetofauna.

Smaller and later papers made further taxonomic changes and/or described new species. This effectively deprived many other professionally employed herpetologists of the right to name taxa (it was now done), and there was a bitter battle fought through the ICZN [International Commission on Zoological Nomenclature] to formally suppress the Wells and Wellington names (Ross Wellington, the co-author of the early papers, was in effect the typist for Richard Wells).

The battle raged until the early 1990s during which time most Australian herpetologists didn’t use the Wells and Wellington names. Furthermore, other herpetologists such as Geoff Witten and Robert Sprackland then redescribed some of the Wells and Wellington taxa (*Pogona brevis* in 1994 and *Varanus teriae* in 1991) either in the hope that the Wells and Wellington names would be suppressed or because they were simply overlooked.

Hal Cogger was one of the main adversaries of Wells and Wellington and he was never keen on the idea of using their names. Hence even after the ICZN ruled in favor of the pair in the early 1990s (Cogger had voted against them), Cogger was loathe to use their names. In later (1990s) editions, Cogger gradually and grudgingly adopted usage of the Wells and Wellington names, but never seemed able to fully accept the reality that in the main the pair had either named hitherto unnamed species or made taxonomic changes at higher (genus) levels that made common sense.

As a result, Cogger’s books never regained their shine in terms of complete and up-to-date coverage that the first 1970s editions had. Put simply, he was allowing his personal biases get in the way of sound scientific judgments. Hence his books tended now to follow other people’s leads in terms of classification matters rather than showing the way or being at the leading edge.

In 2000, Cogger announced that his 2000 “Bible” would be the last. No more would be published. In spite of the size and cost of these books, they sold out quickly and so it was inevitable that one or more authors would move in to fill the void. Put simply, the Australian market needs at least one stamp catalogue-style reptile book on the market at any given time and as of 2003 there was none to be bought.

That’s where this new work by Steve Wilson and Gerry Swan entered the void. In essence it is a “bare-bones” Cogger. Its format is that of a very abridged catalogue of Australia’s

lian reptiles. For each species there is a very brief description and adjacent (usually on the opposite right-hand page) is a small color photograph of the species. In a few cases there are photos of subspecies or variants, but this is not the case for most, even for species with well-known regional races or variants.

The photos are generally small, but the majority are of good quality, although there are some obvious exceptions (e.g., *Pseudechis papuanus* and a lot of the geckos). There is limited information on biology and habits of species under the genus headings, but this information is so sparse as to be of little practical use to people with an interest in the reptiles. The same applies for the diagnostic information for each species, which is generally insufficient in terms of distinguishing one species from another similar species. For example, in terms of *Lerista* skinks, this book would be of little if any help in terms of identifying most species.

Many of the more obscure reptile species in the book are not familiar to me and so I cannot comment on the accuracy or otherwise of information presented. However for those species with which I am familiar, there are numerous errors of fact. These are far too numerous for me to list them all in the space of this review, so I'll list just a few shortly. Errors also seem to be common in some of the distribution maps. Furthermore, while these authors have adopted use of more Wells and Wellington names than Cogger ever did, the coverage of the book in terms of Australian species is still far from complete. Not only have they still failed to include well-recognized taxa described by Wells and Wellington (e.g., "*Cannia weigeli*"), but they have also failed to include a large number of other well-known and described taxa, including some described many years back.

The omission of "*Cannia weigeli*" from the "*Pseudechis*" group, as well as the omission of "*pailsei*" (described in 1998) is even more curious as the authors even went so far as to include a photo of the subspecies "*Pseudechis australis burgessi*" from Groote Eylandt, which was only formally identified by myself in 2001 [Editor's note: Wilson and Swan do not use the name *burgessi*; the photo is captioned as *P. australis*].

Inconsistencies in coverage abound. In terms of the death adders, as in previous books by Gerry Swan (on his own) the authors make a mess of things. For those unaware, in a previous 1995 book, Swan failed to distinguish the desert death adder (*Acanthophis pyrrhus*) from the northern death adder (*Acanthophis praelongus*), depicting the same species, a north-west Australian *A. praelongus* for both species. The two species of snake are radically different. In the case of the death adders in this book, this mess probably arises in part from quoting other authors out of context and failing to realize what the original context was, as well as from other aspects. For example in terms of the so-called "Northern Death Adder (*Acanthophis praelongus*)" the authors lump all north Australian and New Guinean species into this taxon.

While this designation flies in the face of all recent studies, including my own, that of Fry et al. (2001) and others, this

right of allocation is accepted, but with a few qualifications, the obvious being that their descriptions must make sense. In terms of this book, they don't. The description they give for "*Acanthophis praelongus*" appears to have been lifted from that of Glen Storr's 1981 paper which describes West Australian "*A. praelongus*" only. This is radically different from the nominate Queensland form (including the type specimen of *A. praelongus*). Wilson and Swan write it has "moderate to strongly rugose head shields." While that is true for the Western Australian "*A. praelongus*" as described by Storr, later reclassified as another species, it is simply not so for the Queensland ones, making their own description inadequate.

To make things worse, the only specimen depicted in their book is one from Torres Strait, Queensland, which has smooth to lightly keeled scales only. I am very familiar with these snakes and none have moderate to strongly rugose head shields like the Western Australia animals.

Then there's the non-inclusion of the species *Acanthophis hawkei* described by Wells and Wellington way back in the 1980s and yet inclusion of the species *A. wellsei* described by myself as recently as 1998 [Editor's note: Wilson and Swan use the emended spelling *wellsi*]. DNA studies back then confirmed that *hawkei* was a species distinct from *A. antarcticus*, which Wilson and Swan have erroneously referred this taxon to in passing only on the basis of locality.

This failure to account for the species is even more curious in light of the fact that the Queensland Museum website, to which Steve Wilson presumably had input, correctly lists *A. hawkei* as a species in its own right (see <http://www.qmuseum.qld.gov.au/features/snakes/snakedetail.asp?TaxName=Acanthophis+hawkei> or <http://www.qmuseum.qld.gov.au/features/snakes/dangerous/index.asp>, the former page having a detailed description of the species).

The distribution map for the desert death adder (*Acanthophis pyrrhus*) is one of the many in error. This one shows the species occurring in west Queensland. A recent check showed me that there are no specimens of *A. pyrrhus* in the Queensland Museum (or any other museum) from here. The only specimens from the relevant area are *A. wolffi*, which until 1998 was classed as a variant of *A. antarcticus* or *A. hawkei*, but never as the smaller and radically different *A. pyrrhus*.

Then there's the omission of other well-known species such as *Pailsus pailsei* (sometimes assigned to the genus *Pseudechis*). The omission of this snake is curious in that, as with *A. hawkei* (named by Wells and Wellington), DNA studies have shown *pailsei* to be a species in its own right, which puts its status as a distinct species well beyond the majority of Australian taxa that have not been similarly tested. The non-inclusion of this species is even more curious, given that both the Australian (Sydney) and Queensland Museums have (identified) specimens of the species in their collections and much has been made by the publishers of the fact that both authors work at these museums.

I make note of these obvious omissions on the basis that at the front of the book is the statement that the authors present their book as an aid to the identification of "all species de-

scribed to 1 January 2003,” a claim repeated elsewhere in the book. Evidently, they don’t.

Other retrograde steps include calling the Australian water pythons “*Liasis mackloti*” and the numerous claims in relation to the status of Australian reptiles that are patently untrue. By and large the most obvious revolve around overstating the rareness or vulnerability of taxa, that are simply not under any known threat or rare in any way.

An example is the ridiculous claim that *Liasis olivaceus barroni* is “likely to become extinct.” The fact is that there is not a shred of evidence to suggest any decline in this subspecies at all!

Hence in terms of completeness or accuracy, the book clearly fails. The question for readers of this review, is probably along the lines of “is this book worth buying?” Here’s my view. If you are primarily a keeper of reptiles and already have one or more half-decent books on Australian reptiles, this

book will be of no help to you. It has no information at all on keeping captive reptiles. As an identification manual, my view is that the book also fails. Information is generally too sparse or incomplete to be of real use in many cases. Earlier editions of Cogger’s books are superior and if you have one of these, you are probably ahead and will gain little if anything from this book.

If however you do not have a copy of a recent edition of any of Cogger’s books, Ehmann (1992), or Wilson and Knowles (1988), this book is the only available choice you have in terms of a generalized photographic reference of most of Australia’s known reptiles. To the publisher’s credit the book is very well produced, with few obvious production faults. Furthermore at \$50 Australian (about US\$35) and with 480 pages littered with color pictures and on quality paper, it is a very affordable and well-priced book. On this basis alone, the book is generally worth having for most people with a strong interest in Australian reptiles.

Literature Cited

- Barnett, B. F., and G. F. Gow. 1992. The Barkly Tableland Death Adder, *Acanthophis antarcticus*. Monitor, Bulletin of the Victorian Herpetological Society 4(1):13-23.
- Cogger, H. G. 1975. Reptiles and Amphibians of Australia. Sydney, Australia: Reed, New Holland Publishers.
- . 1996. Reptiles and Amphibians of Australia. Reed, New Holland Publishers, Sydney, Australia.
- . 2000. Reptiles and Amphibians of Australia. Reed, New Holland Publishers, Sydney, Australia.
- Cogger, H. G., E. E. Cameron and H. M. Cogger. 1983. Zoological catalogue of Australia, Volume 1, Amphibia and Reptilia. Canberra: Australian Government Publishing Service.
- Ehmann, H. 1992. Encyclopedia of Australian Animals: Reptiles. Sydney, NSW, Australia: Collins, Angus and Robertson.
- Fry, B. G., J. Wickramaratna, A. Jones, P. F. Alewood and W. C. Hodgson. 2001. Species and regional variations in the effectiveness of antivenom against the in vitro neurotoxicity of Death Adder (*Acanthophis*) venoms. Toxicology and Applied Pharmacology 175:140-148.
- Hoser, R. T. 1989. Australian reptiles and frogs. Mosman, NSW, Australia: Pierson and Co.
- . 1998. Death Adders (genus *Acanthophis*): An overview, including descriptions of five new species and one subspecies. Monitor: Journal of the Victorian Herpetological Society 9(2):20-30, 33-41.
- . 2001. A current assessment of the status of the snakes of the genera *Cannia* and *Pailsus*, including descriptions of three new subspecies from the Northern Territory and Western Australia, Australia. Boydii—Journal of the Herpetological Society of Queensland, Inc. July:26-60.
- Storr, G. M. 1981. The genus *Acanthophis* (Serpentes: Elapidae) in Western Australia. Records of the Western Australian Museum 9(2):203-210.
- Swan, G. 1995. A photographic guide to snakes and other reptiles of Australia. Frenches Forest, Australia: New Holland Publishers.
- Wells, R. W., and C. R. Wellington. 1983. A synopsis of the class Reptilia in Australia. Australian Journal of Herpetology 1(3-4): 73-129.
- Wells, R. W., and C. R. Wellington. 1985. A classification of the Amphibia and Reptilia of Australia. Australian Journal of Herpetology, (Supplementary Series) 1:1-61.
- Wells, R. W., and C. R. Wellington. 1987. A new species of proteroglyphous snake (Serpentes: Oxyuranidae) from Australia. Australian Herpetologist 503:1-8.
- Wilson, S. K., and D. G. Knowles. 1988. Australia’s reptiles: A photographic guide to the terrestrial reptiles of Australia. Sydney, NSW, Australia: Collins.
- Worrell, E. 1970. Reptiles of Australia. Sydney, NSW, Australia: Angus and Robertson.

HerPET-POURRI

by Ellin Beltz

Thank heavens he's all right!

"A veterinarian barely survived a venomous snakebite after health officials found an antidote just in time to save him. The snake bit Dr. Laurence Reed, a veterinarian with 35 years experience . . . while he was changing the water dish in the western diamondback's cage. . . . Reed first drove himself to a nearby clinic and from there a friend took him to a Valparaiso hospital. Doctors wanted to airlift him to Indianapolis, but high winds prevented the medevac. "Meanwhile, Reed said his thumb was swelling and painful and it was becoming difficult to breathe. Finally doctors located the antivenin in Indianapolis. They rushed Reed by ambulance south . . . while state police had a doctor with the antivenin drive north . . . they met in Lafayette. . . . [Reed] will recuperate by spending two weeks in the Caribbean for a trip that was already planned." [*South Bend Tribune*, March 10, 2004, from Garrett Kazmierski]

Massasauga bite kills 85-pound dog

"An 85-pound dog was fatally bitten in its back yard by a venomous snake protected by the state, which will neither try to remove the snake nor allow the pet's owner to kill it. The reptile that killed . . . [a] 5-year-old black Labrador retriever, 'Libby,' last week was identified as an eastern massasauga rattlesnake. . . . It is the state's only native, poisonous snake. [*Detroit Free Press*, May 6, 2004]

Otter not panic

"When more than 100 frogs and toads were discovered with their hind legs ripped off on a Scottish estate it seemed a clear case of animal cruelty, prompting fears of a black market in the French delicacy. A police investigation was launched and the public warned that eating the legs could make them sick. The mass mutilation was found at a pond on the Monymusk estate in Aberdeenshire. But detective work by the local wildlife crime officer has found that the most likely culprit does have a taste for frogs' legs but cannot be prosecuted because it is an otter. . . . Reports came in of other similar incidents at other ponds in the area which are known otter habitats. . . . 'Apparently it is not uncommon for otters to remove the back legs of toads,' the police constable said, and added 'It is a natural thing. The otter is just going about its business.'" [U.K. *Guardian*, April 14, 2004]

What were they thinking?

"Would you upset an alligator named Mr. Cranky Pants? Some [Sydney, Australia] thieves who chanced it soon changed their minds," reports the *Chicago Sun-Times*. Thieves took a 4-year-old gator after scaling two barbed wire fences and taking the animal out the same way. After all that, they dumped the gator in a nearby creek. Keepers say the animal seems to be glad to be home again. [April 13, 2004, from Marybeth Trilling]

I'm 1, RU?

You Know You Are a Herper . . . When You Dream in Green, a 136-page paperback is described as a "hilarious look on herp-

ing by herpers." Examples include: (a) you used to hate cockroaches, now you raise them; (b) you send out birth announcements for a hatchling turtle; (c) you know how to say *Uromastyx*; (d) you think it's perfectly normal to buy your snake/turtle/frog/lizard a holiday gift; and more. Ready for immediate shipment, \$11.95 a copy plus \$4.00 for priority mail, two day delivery. Contact Allen Salzberg at (718) 275-2190 for more information and how to order.

Exotic Florida

It should surprise no reader of this column to be told that exotic species are taking hold in various areas around the world. What is now astonishing is the mainstream press they receive. The latest offering, from the *New York Times*, solemnly announces that boa constrictors, Cuban treefrogs, Nile monitors, Burmese pythons and green iguanas are now firmly established in our most tropical mainland state. A nuisance trapper said, "Miami-Dade County is probably ground zero for exotic animals that are on the loose and doing very well. . . . Miami is a fast, disposable society, which means whatever is the hot pet today will be my catch of the day next week." Everglades National Park now has a python hot line. "A recent tip led to the capture of six pythons sunning themselves along a levee," reports a wildlife biologist, who also mentioned that an alligator was reported to have eaten a python in the park. This last report is good because it may mean that gators will keep pythons in control. [February 29, 2004, from Mrs. P. L. Beltz and Alan Rigerman]

Scottish whine

"A Scottish postman got quite a shock when he opened a mailbox to pick up the mail—and found 16 frogs inside. 'I just opened the box and 32 pairs of eyes were staring back at me,' he said. . . . 'I got the fright of my life, and just slammed the door back shut so they couldn't escape.'" He discovered the frogs when "he opened one of the red pillar-style British mailboxes. . . . 'The frogs had just been dropped in through the slot, and were sitting at the bottom of the basket on top of all the letters,' he explained. 'The letters are a bit damp, but thankfully the frogs were okay.'" The Scottish Society for the Prevention of Cruelty to Animals relocated them to a nearby pond. [*Fox News*, April 9, 2004]

Tales of three species

- "A [45-year-old Virginia] preacher who refused medical treatment after a rattlesnake bit him during the serpent-handling part of an Easter service has died. . . . The congregation prayed for [him] but no one sought medical treatment. [He] died Monday at his home. . . . Snake-handlers believe that when people die of a snakebite they receive during a church service, it is simply their time to go." [*Miami Herald*, April 15, 2004, from Alan Rigerman]

- "A two-year-old Dalmatian bitten on the nose by an Eastern Diamondback rattlesnake, was resting . . . at the Animal Medical Center at Cooper City after having received an antivenin

that saved her life.” [*Miami Herald*, April 19, 2004, from Alan Rigerman]

Snake-food!

Two separate incidents observed by Snake Busters in Gainesville occurred in north central Florida during September 2000 and both featured eastern diamondback rattlesnakes, *Crotalus adamanteus*, that had eaten domestic house cats, *Felis catus*. The first rattler was “captured in a homeowner’s front yard . . . and had ingested a meal so large as to become effectively immobile . . . [later regurgitating] a partially digested, large black house cat.” The second snake was also “grossly engorged. . . . Ten days later, the snake defecated . . . [feces] containing black fur, teeth and claws identified as belonging to *F. catus*. On a side note, the burrow where we captured the snake had, radiating away from its entrance, the first-shed skins of nine newborn *C. adamanteus* [sic].” [*Herpetological Review* 34(4), 2003, from new contributor William A. Black]

Added thinking

“In January in Johannesburg, South Africa, an Absa Bank customer upset that loan officers had repossessed his car was charged with attempted murder after he allegedly released five puff adders in the bank’s head office (one worker was bitten but survived).” [News of the Weird, *Chicago Reader*, April 16, 2004, from Marybeth Trilling]

Predictable environmental disaster

“There is huge market in China for frogs and fish products Uganda’s envoy to China . . . said, ‘Frogs, fish, medicinal drugs and minerals are urgently needed to run the Chinese industries and these raw materials are abundant in Uganda, . . .’ [He added] ‘Frogs are very expensive, it’s even more expensive to afford frog legs in Chinese restaurants, yet in Uganda frogs are plenty.’” [Kampala, *Uganda Monitor*, April 6, 2004, from AllAfrica.com]

Yes, we have never found froggies

A 1½-inch-long Caribbean frog (genus *Osteopilus*) was discovered in Portsmouth, U.K., after a 4,000-mile journey in a refrigerated banana boat. “[The] Portsmouth port health officer . . . said it was the first time a frog had been discovered at the port. ‘We handle about 470,000 tons of bananas each year and this is the first time anything like this has been found,’ he said. ‘Apparently a random pallet was chosen to check the quality of the consignment and, during the checking process, someone found the little frog clinging to a hand of bananas.’” [*BBC News Online*, April 22, 2004]

Frequent flyer frogs

Qantas airlines announced that a passenger did really find a frog in her salad, perched atop a cucumber under the plastic lid on a flight from Melbourne to Wellington, New Zealand. The frog was frozen to death in New Zealand and Qantas has increased random food inspections and changed salad supply procedures. [*Asia Pacific News*, May 5, 2004]

Making a recovery

The 700-pound Galapagos tortoise attacked by dogs in his

Homestead, Florida, home is doing well after receiving veterinary care. The tortoise was born in 1841. Where he’s been from then until now, where he lives in a pen at a fruit stand was not mentioned in the article. [*Miami New Times*, April 15-21, 2004, from Alan Rigerman]

Hiss-toric discovery

Reuters reports that the discovery of huge snake-fanged masks and other cultural objects in Cival, Guatemala, has pushed back the age of classical Mayan culture to around 500 B.C., according to archaeologists. The *New York Times* noted that the area had previously been surveyed by Harvard archeologists, who passed on excavations, leaving the site untouched for the current researcher and more modern methods. [both May 5, 2004]

Which came first?

Snakes are invading towns in eastern Croatia after heavy rainfall from recent Mediterranean storms. “Panicked citizens killed more than 200 . . . Orsini vipers, a normally elusive snake that has been driven into populated areas by rising water levels.” [*The Honolulu Advertiser*, May 2, 2004, from Ms. G. E. Chow]

Life’s a niche

The discovery of more than 100 veiled chameleons on Maui in the past two years confirms the presence of a breeding population, officials say. The first veiled chameleon was discovered dead in March 2002. The population is limited so far to only about an acre, but officials are worried someone might move some elsewhere. The chameleons are native to Yemen and Saudi Arabia and have no natural predators on the Hawaiian islands. They grow up to 2 feet long and can survive a wide range of temperatures. Searches take place at night when the lizards sleep on lower branches and are lighter in color than the plants. [*The Honolulu Advertiser*, April 26, 2004, from Ms. G. E. Chow]

Win by losing

Four of the nearly 100 turtles stranded in Cape Cod, Massachusetts, last year were recently released off Volusia, Florida, by workers from the Mote Marine Laboratory in Sarasota. After releasing the turtles in the ocean, their veterinarian said, “It is the best feeling you can imagine. This is what we work for, to send them back out into the wild.” [Orlando *Sentinel*, April 21, 2004, from “Hilda” via Bill Burnett]

Frog jokes

Self-professed Frog-Lover Marybeth Trilling sent several new frog jokes on the envelopes of this month’s clippings:

Q: What’s a frog’s favorite breakfast?

A: Hoptarts!

Q: How deep do frogs like to wade?

A: Knee-deep!

Q: Why did the frogs go to the mall?

A: They wanted to go “hopping.”

Q: What did they eat at the food court?

A: French flies and a diet croak!

Turtles survive dredge

Contrary to protests prior to the project, a 33-day hopper operation in Key West Harbor did not harm any turtles although it did rough up some coral. The \$36 million project was administered by the U.S. Army Corps of Engineers to make the harbor deep enough for large ships and remove sediment which harms coral reefs. [*South Florida Sun-Sentinel*, April 18, 2004, from Alan Rigerman]

And may survive fishing

Turtles may benefit from a new-style hook on long-lines. It is called a “circle hook” and is designed to catch swordfish but repel turtles. Pacific islanders made them from shell a long time ago, new ones will be made of metal and baits will be a mackerel-type fish bait instead of squid. Biologists discovered that turtles try to swallow squid whole, which permits the hook to set and harm the turtle. In contrast, turtles nibble at mackerel-type baits, revealing the hook and avoiding it. The two new rules will be monitored to assure turtle safety. [*The Honolulu Advertiser*, March 31, 2004, from Ms. G. E. Chow]

Wish they were all so tame

In an odd tombstoning, the front page of the *Chicago Sun-Times*, April 16, 2004, juxtaposed “Europe Scoffs at Bin Laden’s Truce” with “She’s OK—he’s already had lunch,” a caption on a photo of Bubba, Jim Nesci’s tame alligator in front of a cute child. Jim said that he’s “not afraid to have the 226-pound gator around kids,” and added “more dogs bite people in Cook County than alligators.” A children’s book is in the works about Bubba. [from Marybeth Trilling]

Letter of the month

Thanks to Paul Breese, Director Emeritus of the Honolulu Zoo, for this interesting and gracious letter: “Dear Ellin, Our late friend Sean McKeown spoke highly of you. We miss him dearly. The purpose of this letter is to tell you how much I appreciate your efforts . . . to keep us amused and informed. Your part is the first thing I read in the *Bulletin*. I admire your efforts and want to be another reader that tells you ‘thank you.’ I know Ms. Chow keeps you informed on Honolulu . . . but here’s one from our Kona paper, way too long for you, I suspect. A while back you ran a reference to snakes at the Honolulu Zoo in WWII. Here’s the facts: In about late 1920s, the Hawaii Legislature passed a law, ‘No snakes of any kind plus Gila’s could be kept in Hawaii.’ My successor at the zoo, Director Jack Throp, in the late 1960s pushed for an amendment to that law to make it possible for the Honolulu Zoo to keep (1) two snakes that had to be (a) non-venomous (b) male and (c) kept at the Honolulu Zoo only. Since then, the Zoo has kept a big Indian python and another snake, usually a handleable one, small ball python or corn snake. Again, Ellin, many thanks for your efforts. Aloha, Paul”

Coqui monsters

The Mayor of Hilo, Hawaii, announced a state of emergency based on the level of coqui frog infestation. He stated that the coqui was not only a danger to the island’s environment, but also to its primary industries: tourism and floral exports. The proclamation may help county officials approach state and federal agencies for monetary assistance in removing coqui frogs from Hilo. The frogs have multiplied quickly from sporadic sightings in 1992, to eight occurrences in 1998, 85 in 2001 and about 150 “firmly established specific sites” of coqui frog populations. [*West Hawaii Today*, April 16, 2004, from Paul Breese]

Thanks to everyone who contributed this month and to Bill Burnett’s Aunt Peggy who so kindly sent a copy of the obituary of Timothy the 160-year-old tortoise who died at his home in Exeter, England and to Ray Boldt, Alan Rigerman and Marybeth Trilling who sent things I enjoyed reading, but couldn’t figure out how to summarize. You can contribute, too. Send articles about herps that show up in the papers and magazines you read. Just clip the whole page—there’s no need to trim, newspaper is incredibly cheap to mail. Fold and put in the biggest envelopes you feel comfortable using (less folding/unfolding) and mail to me: Ellin Beltz, POB 1125, Ferndale, CA 95536-1125.

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Herpetology 2004

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

A NEW SPECIES OF REED SNAKE

L. L. Grismer et al. [2004, Hamadryad 28(1&2):1-6] describe *Calamaria ingeri*, a new species, from Pulau Tioman, Pahang, West Malaysia. It is distinguishable from all other species by sharing a unique combination of scale, tooth, and color pattern characteristics. This brings the total number of endemic species of snakes on Pulau Tioman to at least three. The specific name honors Robert F. Inger, Curator Emeritus of Amphibians and Reptiles at the Field Museum of Natural History, for his "tremendous contributions to Southeast Asian herpetology and especially to an understanding of the genus *Calamaria*."

PREVIOUSLY UNRECOGNIZED TYPE SPECIMENS

R. Bour [2003, Chelonian Conservation and Biology 4(3):537-547] reports that turtles given to the Paris National Museum of Natural History in 1828 and collected by Major John Eatton Le Conte include previously unrecognized type specimens of *Testudo floridana* (= *Pseudemys floridana*), *T. rubriventris* (= *Pseudemys rubriventris*), *T. concinna* (= *Pseudemys concinna*), and *T. insculpta* (= *Clemmys insculpta* or *Glyptemys insculpta*), described by him in 1830, as well as two syntypes of *Testudo depressa* Guérin, 1829 (junior synonym of *Testudo polyphemus* Daudin, 1801) (= *Gopherus polyphemus*).

BOTHROPS MOOJENI ECOLOGY

C. Nogueira et al. [2003, J. Herpetology 37(4):653-659] note that *Bothrops moojeni* is a member of the *atrox* group that occurs in central and southeastern Brazil and adjacent Paraguay and Argentina. The authors describe habitat use, diel and seasonal activity, biometry, feeding habits, and reproduction of *B. moojeni*, based on field studies and analysis of 207 preserved specimens. *Bothrops moojeni* predominantly uses riparian vegetation in the Cerrado (central Brazilian savannas), such as gallery forests and adjacent wet grasslands, although they occasionally use drier interfluvial areas. Sexes are dimorphic in snout-vent length, relative tail length, relative mass, and relative head length. Main prey types were mammals, frogs, and lizards. There is an ontogenetic dietary shift from ectotherms to endotherms. Prey-predator mass ratio ranged from 0.008 to 1.079, and prey mass was positively correlated with predator mass. Although prey absolute mass was positively correlated with snake mass, large snakes did not eliminate small prey from their diets. There was an ontogenetic decrease in prey relative mass. Females consumed more endothermic prey than males, and this difference probably reflects size differences. The reproductive cycle is lengthy and seasonal, with recruitment restricted to the rainy season. Fecundity is positively correlated with female body size. Life-history characters of *B. moojeni* are similar to those of other members of the *atrox* group, even though *B. moojeni* occurs in the Cerrado, a drier and more seasonal biome.

DART FROG COLOR CROSSES

K. Summers et al. [2004, J. Herpetology 38(1):1-8] note that populations ascribed to *Dendrobates pumilio*, the strawberry poison frog, show extreme variation in color and color pattern among island and mainland locations in the Bocas del Toro Archipelago in Panama. Previous analyses indicate that these different populations are probably members of a single species. The authors present data on crosses between several different color and color pattern morphs. Successful crosses were made between different morphs from seven populations: Bocas Island, Nancy Cay, Pope Island, Bastimentos Island, and Almirante, Rambala and the Aguacate Peninsula on the mainland. The resulting offspring were characterized for color and color pattern. This study indicates that different color morphs can interbreed to produce viable offspring. The offspring typically displayed a mixture of colors but always showed color pattern if one parent showed color pattern. This suggests that color pattern is under single locus control with dominance, whereas coloration may be under polygenic control, or may represent a single locus system with incomplete dominance.

A NEW SPECIES OF BLACK-HEADED SNAKE

P. J. Stafford [2004, J. Herpetology 38(1):43-52] describes *Tantilla hendersoni*, a new species of black-headed snake from southern Belize. This species, a member of the *taeniata* group, is characterized by a dark gray-brown, almost black ground color, a narrow pale middorsal stripe confined to the vertebral scale row; a narrow pale lateral stripe on adjacent thirds of the third and fourth scale rows; a broad pale nape band that is complete medially; dark mottling on the lateral edges of the ventrals; and 153 ventrals + 64 subcaudals in the single known specimen, a female. It is most similar to *Tantilla impensa* of southern Chiapas, central Guatemala and western Honduras but differs from this species in its darker overall color pattern, the presence of dark mottling on the lateral edges of the ventrals, and in having a lower number of ventrals. The specific name honors Robert W. Henderson, Curator of Herpetology, Milwaukee Public Museum, in recognition of his many published studies on the herpetofauna of Belize.

AMPHIBIANS OF GOA

A. K. Sarkar and S. Ray [2004, Hamadryad 28(1&2):7-18] summarize data on 27 species of the amphibians of Goa, western India, based on collections in the Zoological Survey of India that were made between March 1966 and July 1979. A total of 397 specimens are reported upon. Four species (*Microhyla rubra*, *Indirana beddomii*, *Limnonectes brevipalmatus* and *Gegeneophis ramaswami*) are recorded for the first time from Goa. A microhylid, *Ramanella mormorata* Rao, recorded in 1997 from southern Goa after over half a century, was found from both the northern and southern parts of Goa. Diagnoses have been added for determination of species.

HAWKSBILL SEA TURTLES IN NICARAGUA

C. J. Lagueux et al. [2003, Chelonian Conservation and Biology 4(3):588-602] report results from nesting beach surveys and egg protection activities for hawksbill turtles, *Eretmochelys imbricata*, on the Pearl Cays, Nicaragua, from 1999 to 2002. A total of 154, 158 and 155 clutches were recorded in 2000, 2001 and 2002, respectively, between April and November with peak nesting in July. Most nesting activity occurred on Wild Cane, Crawl, Grape, Lime, and Water Cays. Prior to the implementation of nest protection activities in 2000, almost 100% of the egg clutches laid were taken, as well as any females encountered on the beach. Mean clutch size was 138.4 eggs. Over the three years, 44.9 % ($n = 175$) of the clutches were relocated to protect against human predation and 55.1% ($n = 215$) were left *in situ*. Overall hatching and emergence success of nests in which at least one egg hatched was 68.7 and 65.6% for relocated clutches, and 75.5 and 74.6% for clutches left *in situ*, respectively. For those clutches that had at least one egg hatch, overall hatching and emergence success was 72.5 and 70.7%, respectively. For all clutches, overall hatching and emergence success was 66.2 and 64.6%, respectively. The nesting population of hawksbills on the Pearl Cays of Nicaragua is probably one of the largest remaining in the central-western Caribbean. The authors estimate the Pearl Cays population to be between 85 and 165 nesting females. Protection of females and their eggs must continue so that the population can begin to recover from many years of overexploitation. Current threats to nesting hawksbills, their eggs, and habitat in the Pearl Cays area include the construction of houses and docks, clearing and burning of upper beach vegetation and clearing of mangroves, artificial lights, an increased presence of humans and dogs, and poaching of females and eggs. A management plan for the Pearl Cays is needed to regulate development, promote conservation, and minimize threats to hawksbills and their habitat. Development of a plan should include participation of all stakeholders to ensure the recovery of the hawksbill foraging and nesting populations and the longterm health of natural resources in the area.

TWO-LINED SALAMANDER MICROHABITATS

S. Smith and G. D. Grossman [2003, Copeia 2003(3):531-543] note that multiple physical habitat characteristics can affect the abundance and distribution of larval stream salamanders. This study quantified seasonal patterns of microhabitat use by larval southern two-lined salamanders (*Eurycea cirrigera*) and microhabitat availability in two Georgia Piedmont streams from April 2000 to April 2001. Larvae were generally significantly underrepresented in deep areas with low percentages of coarse substratum, locations dominated by bedrock substrata, and areas lacking debris (November sample only). Both between-stream differences in microhabitat use and within-stream seasonal differences in microhabitat use generally reflected differences in microhabitat availability. The close association of larval two-lined salamanders with substrata that provided cover indicates that habitat heterogeneity is important for this species. Consequently, loss of habitat complexity through anthropogenic disturbance may result in decreases in abundance of southern two-lined salamanders in Georgia.

FOOD HABITS OF THE GRASS SNAKE

P. T. Gregory and L. A. Isaac [2004, J. Herpetology 38(1): 88-95] note that generalist species are often both widely distributed and abundant. They also are often plastic in their ecology, both spatially and temporally, in response to variation in resources. The authors studied the food habits of the widespread European grass snake, *Natrix natrix*, in Kent in south-eastern England. As elsewhere in their range, grass snakes at the study site mainly ate anurans (63%); however, small mammals also were fairly common in the diet (25%) and fish (10%) and birds (1%) were taken occasionally. About 65% of prey eaten by snakes were swallowed headfirst, but orientation of prey during ingestion varied among prey types. Although anurans are the major prey of grass snakes, the predominant species in their diet varies geographically, presumably in relation to availability; in this study the most frequently eaten species (63%) was the introduced marsh frog, *Rana ridibunda*, which is very common and possibly influences abundance of snakes. Few data were obtained on feeding habits of small snakes (< 400 mm SVL) but anuran prey was found in the smallest snake in the sample; other prey types were eaten by larger snakes and therefore presumably are added to the diet as snakes grow. Maximum size of prey increased with snake size, but large snakes nonetheless continued to eat small prey as well. However, because grass snakes are sexually dimorphic (females larger), such size effects may be confounded with sex effects. Snakes had food in their stomachs less frequently in midsummer than they did in early and late summer. Nonetheless, even after adjusting for such seasonal variation, gravid females contained food less frequently than nongravid females. Thus, gravid females of this oviparous species apparently exhibit anorexia similar to that seen in pregnant females of many viviparous species.

REPRODUCTIVE BEHAVIOR IN *SMILISCA*

J. H. Malone [2004, J. Herpetology 38(1):27-35] reports for the first time the reproductive modes for *Smilisca puma*, *Smilisca sila*, and *Smilisca sordida*. *Smilisca puma* has the generalized reproductive mode of anurans with eggs deposited as a surface film in lentic water. *Smilisca sila* and *S. sordida* have the basin construction reproductive mode. *Smilisca sila* constructs an open depression and deposits eggs within the depression. Basins of *S. sordida* consist of three types: (1) basins with eggs attached to the substrate (AE); (2) basins with eggs floating on the surface of the water (FE); and (3) eggs buried beneath the substrate. Length of AE basins was, on average 10% longer than FE basins. The area in which eggs were buried was about 1.5 times greater in basins with buried eggs than the area of other basin types. Eggs of *S. sordida* are also deposited in streams indicating that basin building is a facultative behavior for this species. The frequency of basin types varied spatially and temporally during the reproductive season. More basins were constructed on islands than on stream banks. Open basins were the most common type of basin observed during the middle of the reproductive season, whereas eggs deposited in the absence of basins only occurred at the beginning of the reproductive season.

DIVING BEHAVIOR OF JUVENILE SEA TURTLES

M. Salmon et al. [2004, J. Herpetology 38(1):36-43] compared activity, diving behavior and response to prey by *Dermochelys coriacea* and *Chelonia mydas* during their first 8-10 weeks of development. They reared juveniles in the laboratory and, at two-week intervals, released them in the ocean for a brief trial. Each turtle towed a device used to measure its dive profile. All turtles swam throughout their trials, but *D. coriacea* swam more slowly than *C. mydas*. *Dermochelys coriacea* dives had V-shaped profiles and older turtles made longer and deeper (up to 18 m) dives than younger turtles. *Chelonia mydas* dives were usually shallow (< 6 m) and consisted of three (V, S, and U) profiles. Older *C. mydas* made dives that were longer but only slightly deeper than those of younger turtles. *Dermochelys coriacea* fed throughout the water column exclusively on gelatinous prey *Aurelia*, ctenophores and unidentified gelatinous eggs. *Chelonia mydas* fed near the surface on floating *Thalassia* and *Sargassum* or at shallow depths on ctenophores and unidentified gelatinous eggs but ignored large jellyfish (*Aurelia*). Thus, early in development the two species overlap in foraging area and in diet. However as *D. coriacea* grow they dive deeper where prey assemblages probably differ from those in shallow water where *C. mydas* feed. These distinct behavioral trajectories probably cause the niches of *D. coriacea* and *C. mydas* to separate spatially very early in their development.

DEWLAP DISPLAYS IN *ANOLIS SAGREI*

R. R. Tokarz et al. [2003, Copeia 2003(3):502-511] note that the extension and retraction of the throat fan or dewlap is one of the most conspicuous aspects of the display behavior of male *Anolis* lizards. The authors explored aspects of the functional significance of displaying the male's dewlap by surgically preventing male brown anoles (*Anolis sagrei*) from extending their dewlaps and comparing their behavior with controls that could extend their dewlaps. In 30-min laboratory contests, they compared the display behavior of untreated males paired with either experimental males or with sham-treated control males. A subsequent field study tested what effect displaying the dewlap has on male residence time (days males remained at a site), visibility (number of sightings of males), maximum distance moved (from site of release), home range size, and body size during 18 censuses over a 47-day period. Untreated males paired with the two types of stimulus males in the laboratory study did not differ significantly in latency to display, number of dewlap extensions, number of bobbing displays, number of bobbing displays with dewlap extensions, or in proportion of males erecting crests in both short distance physical encounters (< 0.6 m) and in visual encounters at 1 m and 3 m. Thus, males did not modify their display behavior based on whether their opponents extended their dewlaps. In the field study, experimental and control males did not differ significantly in residence time, visibility, maximum distance moved, and homerange size. In addition, males in the two treatment groups captured at the end of the study did not differ in snout-vent length or body mass. These results provide no evidence for a functional significance of the displaying of the male's dewlap in *A. sagrei*.

HERPETOFAUNA OF CENTRAL VIETNAM

T. Ziegler et al. [2004, Hamadryad 28(1&2):19-42] provide an updated list of the herpetofauna of the Phong Nha – Ke Bang National Park, situated in the Quang Binh Province, central Vietnam. Forty-eight color photographs of specimens are included. As a result of recent fieldwork, 33 species were added to the list of amphibians and reptiles for the area. This brings the total number of amphibian (40) and reptile (92) species to 132. Thirty-two of the amphibian species (80%) and 62 of the reptile species (67%) were recorded. The authors recommend removing *Phrynoglossus laevis*, *Rana sauteri*, *Cyrtodactylus pulchellus* and *Takydromus wolteri* from the herpetofaunal list of the National Park, resulting in 128 species records. The status of some species remains unclear. Of the 33 species which are recorded for the first time for the Phong Nha – Ke Bang area, two, *Cyrtodactylus phongnhakebangensis* and *Triceratolepidophis sieversorum*, were recently described. They are endemics to the study area, the latter co-occurring in the adjacent Hin Namno National Biodiversity Conservation Area on the Laotian side of the border. The taxonomic status of four newly recorded taxa (*Gekko* sp., *Scincella* sp., *Amphispma* sp. and *Trimeresurus* sp.) remains in question. The status of *Leptolalax* sp., *Microhyla* cf. *annamensis*, *Polypedates* sp., *Gekko gekko*, *Draco maculatus*, *Scincella reevesii*, *Dinodon* cf. *rufozonatum*, *Lycodon* cf. *paucifasciatus*, *Rhabdophis chrysargos*, *Naja* cf. *atra* and *Trimeresurus* cf. *vogeli* needs further attention. Approximately 20% of the species are listed in the Red Data Book of Vietnam, among them two of the new records (*Oreophis porphyraceus*, *Trimeresurus cornutus*).

ECOLOGY OF A BRAZILIAN GECKO

G. R. Colli et al. [2003, J. Herpetology 37(4):694-706] describe the ecology of the gecko *Gymnodactylus geckoides amarali* in the Cerrado of central Brazil and using published data, compare it with the conspecific *Gymnodactylus geckoides geckoides* from the Caatinga of northeastern Brazil. *Gymnodactylus geckoides amarali* is rupicolous, living primarily in rock crevices in “campos rupestres” (rocky fields), which are highly patchy in Cerrado. Field body temperatures were low and associated with environmental temperatures, suggesting thermoconformity. Termites were the most important food item, and consumption was greatest during the dry season. The authors suggest that access to termites is facilitated by the shallow soils used by *G. g. amarali* and by its well-developed chemosensory apparatus. Reproduction was concentrated in the dry season, a pattern known for very few Cerrado squamates, possibly because of the higher availability of termites during that period. Clutch size was significantly correlated with female size, a pattern unknown in any other gecko, and there was no association between egg size and female size. *Gymnodactylus geckoides amarali* produced larger clutches of smaller eggs relative to *G. g. geckoides*, presumably because of the high climatic unpredictability of the Caatinga. Significant sexual dimorphism was found in both body size and shape: females were larger and had smaller heads than males. The authors suggest that large female size is likely a plesiomorphic character of gekkonids and that large head size in males results from sexual selection.

ORNATE BOX TURTLE ECOLOGY

M. V. Plummer [2003, *Chelonian Conservation and Biology* 4(3):569-577] studied activity and thermal ecology of *Terrapene ornata luteola* in southeastern Arizona, near the extreme southwestern range limit for *T. ornata*, using a combination of radiotransmitters and temperature data loggers attached to individual turtles. Surface activity was greatly affected by rainfall and operative temperatures both seasonally and daily. Most of the annual activity occurred in a 90-d period from July through September coincident with monsoon rains. On a daily basis, turtles exhibited two periods of surface activity, a 3 hr period in early morning and a 1.5 hr period in late afternoon. Precipitation enhanced both daily and seasonal activity. Burrows of the kangaroo rat, *Dipodomys spectabilis*, provided the most important subterranean refuge. The observed patterns of daily activity, field body temperatures, and laboratory preferred body temperatures in Arizona were similar to those of most other populations of *T. ornata* that have been studied across the species' range, with the exception of extreme northern populations in Wisconsin and Nebraska. Compared to populations of *T. ornata* in the central portions of the species' range, there is no clear evidence of adjustments in either behavioral microhabitat use, thermoregulatory set point temperatures, or field body temperatures at the species' southwestern range limits. Broad thermal tolerances and an ability to behaviorally adjust both daily and seasonal activity times opportunistically may permit the existence of *T. ornata luteola* at its southwestern range margin in Arizona where hydric and thermal factors might be expected to constrain a primarily prairie-adapted species.

SOUTH PACIFIC IGUANAS

G. K. Pregill and D. W. Steadman [2004, *J. Herpetology* 38(1):15-21] report that the diversity and distribution of Pacific island iguanas were altered drastically following human colonization around 2800 years ago. A giant iguana recovered from archaeological sites in the Ha'apai group of islands, Kingdom of Tonga, became extinct within a century of human arrival. The authors describe this iguana as *Brachylophus gibbonsi*. The specific name recognizes the late J. R. H. Gibbons for his exemplary work on the ecology and systematics of the species of *Brachylophus* found living today in Fiji (*Brachylophus fasciatus*, *Brachylophus vitiensis*) and parts of Tonga (*Brachylophus fasciatus*). Additional evidence suggests that *B. fasciatus* was probably introduced to Tonga (the type locality) by prehistoric people 2000 years after extinction of the giant form. *Lapitiguana impensa* described in 2003 from Fiji by G. K. Pregill and T. H. Worthy was an even larger extinct iguana that also succumbed to human impact. The two living species are relicts of a much richer evolutionary history than previously known.

MOUNTAIN CHICKEN REPRODUCTION

R. C. Gibson and K. R. Buley [2004, *Copeia* 2004(1):128-135] note that the "mountain chicken," *Leptodactylus fallax*, is an endangered frog (Leptodactylidae) found only on Montserrat and Dominica in the eastern Caribbean. They

report the first captive breeding of this species and document a unique reproductive strategy with an unprecedented level of maternal care. Male frogs fought and dominant animals occupied a nesting burrow. Males enticed females into the burrow with a trilling bark call (100–120 calls/min). A terrestrial foam nest was produced after 9–14 h. Female frogs remained close to their foam nests and defended them aggressively throughout larval development (42–57 days). Females fed larvae (26–43 per nest) trophic (unfertilized) eggs. Many provisioning events (10–13) were recorded, supplying a total of 10,000–25,000 eggs. Male frogs also remained close to the burrow and defended the site. Trophic eggs were the exclusive food source for the developing larvae, and *L. fallax* is therefore probably displaying a new form of amphibian endotrophy.

RED HILLS SALAMANDER SEXUAL DIMORPHISM

K. A. Bakkegard and C. Guyer [2004, *J. Herpetology* 38(1):8-15] note that body size is an important variable used in life-history and sexual selection theory to predict reproductive, behavioral, and ecological traits. Except for the presence of special skin glands in males, sexual dimorphism has not been reported in the Red Hills salamander (*Phaeognathus hubrichti*), the basal member of the Desmognathinae. These data provide insight into the evolution of SSD (sexual size dimorphism) in the entire subfamily. The authors conducted multivariate and univariate tests on eight morphological measurements of 92 preserved *P. hubrichti*. They also examined specimens for broken tails and U-shaped scars, which may indicate bites from conspecifics. Male salamanders were larger than females in all measurements except tail length and had more scars than either females or juveniles. This species exhibited male-biased SSD in shape and size: males were broad and bulky, females were long and thin. Regression analysis showed differences in resource allocation between male and female salamanders. Differences in life-history strategies and sexual selection in the form of male-male combat may explain these differences in body size.

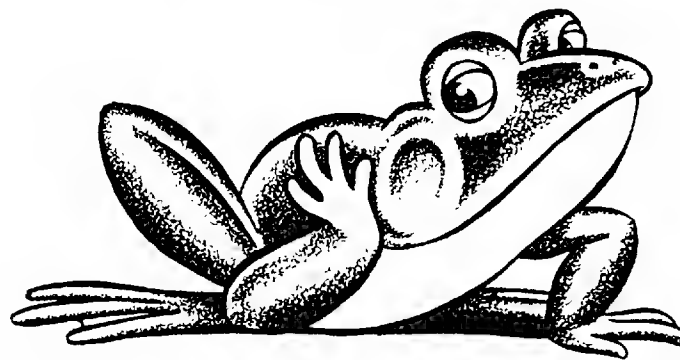
WATER ECONOMY IN TWO PLETHODONTIDS

S. M. Wisely and R. T. Golightly [2003, *J. Herpetology* 37(4):659-665] note that amphibians in general, and plethodontid salamanders in particular, are highly susceptible to cutaneous water loss. The authors compared behavior, habitat use, and physiology of *Batrachoseps attenuatus* (Eschscholtz) and *Ensatina eschscholtzii* (Gray) in Humboldt County, California, to identify adaptations of water economy. Both species lost more body water in a dry environment than in a wet one. In the field, sites with salamanders had higher relative humidity than sites without salamanders. In behavioral experiments, both species used water-conserving postures; they positioned themselves deep in leaf litter in dry environments while remaining on the surface of leaf litter in wet environments. The slender morphology of *B. attenuatus* may aid in habitat partitioning by plethodontid salamanders; in the field *B. attenuatus* was found closer to the surface of the leaf litter than *E. eschscholtzii*. The evolution of a slender body shape appears to be unconstrained by microclimates typically encountered by this species.

The Tympanum

Re: Builders Association Undermines Endangered Species Act in Wisconsin

The Metropolitan Builders Association (MBA), with the support of the Joint Committee for Review of Administrative Rules (Joint Committee), are threatening the integrity of the Endangered Species Act:



the results.

- ▶ In Fall 2003, the MBA petitioned the Joint Committee to de-list the Butler's Garter snake from the threatened species list, to eliminate all regulatory constraints that slow their development projects based on economic hardships.
- ▶ Half of the projects reviewed for Butler's impacts proceed without any design changes. Only 15% of projects are encumbered with moderate design changes.
- ▶ Project costs attributable to Butler's are usually less than 1% of total project cost, and are often less than 0.5%.
- ▶ According to the DNR, the delays were due more to wetland boundary delineation problems, permit application issues, questions as to whether the permits should even have been issued for those wetland fills, and staffing problems.
- ▶ No projects have ever been halted because of Butler's gartersnake protection.
- ▶ If the Joint Committee was successful in suspending NR 27.03(3)(c)3, relating to Endangered Species Act, Wisconsin would be the first state in U.S. history to suspend an endangered species listing solely for economical and political reasons.
- ▶ Since the hearing, mechanisms for public opinion have been non-existent.
- ▶ Contrary to the MBA, the DNR shows that the Butler's gartersnake continues to decline, and will become endangered if this trend continues. Unlike other common Wisconsin snakes, the Butler's range in Wisconsin is restricted to the Greater Milwaukee region where all populations are becoming isolated and fragmented and most are probably no longer viable.
- ▶ Since the December meeting, the DNR has been working with all affected parties to develop a conservation strategy that is acceptable to everyone. The Conservation Plan's strategy, as proposed, would alleviate nearly 50% of the burden the incidental take law has placed on the building community, while allowing the DNR to focus conservation efforts on the large, most significant remaining sites for the snake.
- ▶ The DNR has funded a major effort to acquire additional data in 2004. This new data has the potential to allow for additional easing of restrictions for developers, but the Joint Committee will not wait 6 months for the results.
- ▶ On April 15, the DNR presented a Conservation Plan to the JCRAR as an alternative to de-listing the Butler's Gartersnake. Again, only MBA and DNR were invited by the JCRAR where the Conservation Plan was rejected.
- ▶ On April 28, another hearing with no public input took place and the Joint Committee was to vote on the de-listing. Only at the last hour did the MBA retract their support for the revised DNR Conservation Plan, and they did not express this dissension verbally, but through a notice slip at the hearing.
- ▶ Several Republican members of the Joint Committee have admitted that the de-listing of the Butler's by their committee would harm their political careers. As a result, they have instead moved to micromanage the DNR by requesting that the agency adopt the conservation strategy as an administrative rule.
- ▶ According to the DNR, if the Joint Committee makes the conservation strategy an administrative rule would significantly limit the DNR's ability to adjust the strategy based on the newest science but would rather create a set of firm rules that would not allow for flexibility or the timely changing of those rules.
- ▶ The DNR has demonstrated their willingness to readily adapt to new science in the past with this species and, in most cases, these changes have benefited the development community. The DNR recognizes the need to work within the framework of responsive adaptive management.
- ▶ The MBA do not have objective or quantifiable data to back up their assertion that Butler's are "found everywhere." Furthermore, few people can distinguish between Butler's and common gartersnakes, and many of these observations may be of common gartersnakes, a separate species found statewide. A free service is available to verify Butler's identification.

The Wisconsin DNR web page on Butler's gartersnakes is: <http://www.dnr.state.wi.us/org/land/er/factsheets/herps/btgrsn.html>. For further information please contact: **Paula Zamiatowski, zam@execpc.com.**

Unofficial Minutes of the CHS Board Meeting, April 16, 2004

Lori King called the meeting to order at 7:32 P.M. Board members Matt Campbell, Jim Hoffman and Brian Jones were absent.

Officers' Reports

Recording Secretary: Melanie Aspan read the minutes of the March 19 board meeting. Corrections were made and the minutes were accepted.

Treasurer: In Jim Hoffman's absence, Lori King presented the financial statement for March. Lori also related to the Board that there has been some discussion regarding whether or not a budget should be drawn up for the 2004 fiscal year. Board members with comments about this were directed to send an E-mail to Jim Hoffman before the May Board Meeting.

Membership Secretary: Linda Malawy inquired about the number of members gained at ReptileFest this year, and Mike replied that the total was about ten.

Vice-President: Linda Malawy announced that the speaker for the April General Meeting will be Karl Switak and his slide presentation will feature South Africa's Kalahari Desert.

Corresponding Secretary: Steve Spitzer mentioned that the raffle letters he has sent out so far this year have garnered no donations. Steve also confirmed that he has sent the letter to Governor Blagojevich opposing the proposed budget cuts.

Publications Secretary: Dr. Richard Nye, a veterinarian at the Midwest Bird and Exotic Animal Hospital has contacted the CHS about updating and distributing the Care in Captivity sheets that were published some years ago and given out to our members. This was discussed and it was agreed that he should be allowed to use the sheets as a basis for his project.

Committee Reports

ReptileFest: Steve Spitzer commented that he thought the show was well run this year and there was general agreement.

Shows: Jenny Vollman presented the dates for shows at the Notebaert Museum: May 1-2; June 5-6; July 10-11; August 7-8; September 11-12. Jenny also mentioned that the CHS has been invited to the Earth Day celebration at Plum Creek Nature Center on April 24 from 10 to 4. Lori King asked for volunteers to bring animals to "Dinner with a Dinosaur," May 8 at the Garfield Park Conservatory, and to the outdoor "Science, It's Everywhere" Festival at Jackson Park on May 22.

Monthly Raffle: Lori King brought up Steve Spitzer's earlier comment that no companies have responded yet to letters soliciting raffle donations. It was discussed and there was some agreement that the raffle could perhaps rely more heavily on donations from CHS individual members as well as a possible influx of Reptiques items as Jack Schoenfelder downsizes.

Adoptions: Linda Malawy announced that it has been a slow month for the Adoptions program, but she specially mentioned Ty Park and the adoption of his new leopard tortoise.

General Meetings: Lori King reminded everyone that the Herp of the Month for April is Beginner Herps, and inquired

about the Short Presentation for April. Ron Humbert related that Matt Campbell is expected to be giving April's presentation, but if he is not available Ron will present again.

Conservation: Lori King happily announced that more than half of the 50 T-Shirts ordered for Blue Iguana conservation to be sold at ReptileFest were sold, and E-mail orders have been coming in since then.

Chicago Wilderness: Ron Humbert noted that Chicago Wilderness is in need of donations. It was discussed and the Board decided to wait until Jim Hoffman could be contacted regarding the amount that the CHS donated last year. The possibility of raising the donation from last year's amount was discussed because of federal budget cuts to their funding.

Old Business

State Reptile/Amphibian: Ron Humbert reported a productive meeting after Salamander Safari. Representatives from Brookfield Zoo, the Shedd Aquarium and the Notebaert Museum are now involved in this effort. He also announced that voting through the Internet should be possible.

PARC: Lori King confirmed that this issue would be tabled until we can get a representative from PARC out to speak with us about the organization. Lori passed around a brochure that has been received from PARC that outlines their suggestions for permits on collecting native herps.

Budget Cuts: Steve Spitzer confirmed that he had sent out the letter to Governor Blagojevich from the CHS protesting the cuts. Linda Malawy stated that many of these letters had been handed out at ReptileFest with the hope that attendees who took them would sign them and send them to the Governor.

Zoo Trip: Lori King announced that it has been decided that the trip this year will be to the National Mississippi River Museum and Aquarium in Dubuque, Iowa. Lee Jackson, who has invited us, also suggested a possible side trip to Green Island for some herping.

Salamander Safari: Ron Humbert announced that all the attendees at this year's Safari had a good time. There were 169 people in attendance, 14 of whom were CHS members.

New Business

T-Shirt Sales: Ed Rzewnicki has offered to take over sale of the T-Shirts that we still have in stock. He plans to offer them for sale over the Internet and through the *Bulletin*.

2004 IL Reptile & Amphibian Medicine Award: This organization is soliciting a donation for this year's honoree. Steve Spitzer moved to allocate \$100 and a one-year membership in the CHS. Linda Malawy seconded. It was discussed and Ron Humbert offered to present a check in Jim Hoffman's absence since the ceremony is taking place this weekend. Ron will of course be reimbursed later. The motion passed, all in favor.

The meeting was adjourned at 9:18 P.M.

Respectfully submitted by Melanie Aspan, Recording Secretary.

Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutritionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, \$.17 each; fuzzies, \$.24 each; hoppers, \$.30 each; weanling, \$.42; adult, \$.48. Rats: starting with pinks at \$.45 each, to XL at \$1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. PO Box 85, Alpine TX 79831. Call **toll-free** at (800) 720-0076 or visit our website: < <http://www.themousefactory.com>> .

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice available: small newborn pinks up to jumbo adults. Prices start at \$25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: herp books. *Australian Reptiles in Colour* by Harold Cogger, 1967, 112 pp., 50 color plates which are excellent photos of reptiles taken in their natural habitat, DJ somewhat tattered, hardbound, \$15; *Some Common Snakes and Lizards of Australia* by David McPhee, 1963 (1959), 125 pp., many b&w photos, small, pocket-size book, spine slightly scuffed, softbound, \$26; *The Reptiles & Amphibians of Alabama* by Robert Mount, 1975, 350 figs. (b&w photos and range maps), the definitive work on Alabama herps, softbound, \$26; *The Giant Snakes* by Clifford Pope, 1962 (1961), 290 pp., b&w photos, hardbound, \$25; *Living Reptiles of the World* by Karl Schmidt and Robert Inger, 1961 (1957), 287 pp., many color and b&w photos, tattered DJ, hardbound, \$25. All books are in excellent condition except as noted. Send E-mail address for complete list. Orders for \$25 or more sent postpaid; \$2.50 postage and handling for orders under \$25. William R. Turner, 7395 S. Downing Circle West, Littleton, CO 80122, (303) 795-5128. E-mail: toursbyturner@aol.com.

For sale: c.b. '03 yellow anacondas, aggressive feeders, perfect health, about 2' long, \$100 each; also c.b. '04 reticulated pythons; beautiful hatchlings already feeding on adult mice. These guys are tiger siblings and are available for \$100/each as well. Personal checks, money orders and Paypal accepted. Out of state shipping available. If you have questions or would like to purchase an animal call Mark Petros, (847) 836-9426 or E-mail ballpython777@yahoo.com.

For sale: female Barbour's map turtle, \$150; ringed python, sex unknown, \$150. Jim McDermott, (708) 952-0132. [This ad appeared with the wrong telephone number last month]

For sale: Now taking reservations for 2004 unusual garter snake expected offspring. The babies are expected to be born this June. **Easterns**: Florida, \$25 each/2 for \$40; albinos (limited numbers), 4 strains, \$195–250 each; flames & speckled flames, market value; melanistic, \$35 each; silver hets, \$75 each; granite, \$150 each (limited numbers); granite hets, \$75 each; erythrists, \$100 each. **Plains**: normal, \$25 each/2 for \$40; snows, Iowa and Nebraska, market value; albinos, Iowa and Nebraska, market value; anerythristic, market value; axanthic (co-dominant trait), \$95 each; quad hets, \$75 each; red × albino—albinos, \$125 each, hets, \$40 each; Christmas albino, market value; super Christmas albino, \$175 each; red albino plains, market value; hybinos, \$195 each; hypos, \$95 each. **Santa Cruz**, \$60 each; **Wanderings**: normals, \$25 each/2 for \$40; albinos (limited numbers), \$150 each; het albino, \$50 each; possible het albino, \$35 each; melanistics, \$95 each; het melanistics, \$35 each; **California red-sided**, \$125 each, **Florida true blue-striped (similis)**, \$40 each; **Red-sided**: normal, \$25 each/2 for \$40; albinos, \$375 each (limited numbers); possible het albinos, \$60 each; anerythristic, \$100 each; hets, \$50 each; possible hets, \$35 each; het colorless, \$35 each. Contact Scott via email SFelzersgarters@nc.rr.com or call (919) 365-6120 EST. Web address is < <http://www.scottfelzersgartersnakes.com>> .

Herp Tours: Why pay more? Travel with the International Fauna Society, a 501 (c)3 not-for-profit organization, and experience the Costa Rican rainforest! Stay at the beautiful Esquinas Rainforest Lodge in the untouched herpetological paradise that is Piedras Blancas National Park. Meet new friends, relax in the naturally-filtered swimming pool or in the lush, fauna-filled tropical garden. Discounts for IFS and Chicago Herp Society members. For details, visit The International Fauna Society website at www.faunasociety.org or E-mail: info@faunasociety.org.

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Herp tours: Experience the Amazon! Road-ride in Costa Rica! See and photograph herps where they live, have fun doing it, make good friends and contacts, and best of all . . . **relax!** From wildlife tours to adventure travel, **GreenTracks, Inc.** offers the best trips led by internationally acclaimed herpers and naturalists. See our website < <http://www.greentracks.com>> or call (800) 9-MONKEY. E-mail: greentracks@frontier.net.

Pet Sitting: In-home care for all your pets' needs. Specializing in reptiles, amphibians, birds, fish, dogs, cats. . . . Very passionate in herpetology, experienced vet technician at an exotic animal hospital, aquarium technician for over 10 years. Great references available. Call Lisa Collins to book your special care requests, (847) 644-3681. [Northshore based]

Wanted: Female ball pythons, adults preferred but smaller animals also considered. I am a professional breeder specializing in ball pythons and I can assure you that your animal will be provided with excellent care and optimal living conditions. Mark Petros, (847) 836-9426; ballpython777@yahoo.com.

Wanted: I'm looking for my soulmate. I want to settle down to a family before it is too late. But I have this problem. . . . When we get into hobbies and interests: old popular records, jazz and show tunes, and antique electronics are fine, but when I mention turtles, "What, are you crazy?" So maybe this is a better place to look. Please don't try to separate me from my turtles—at least not most of them. If interested, please drop a line to Ellis Jones, 1000 Dell, Northbrook IL 60062, telling a bit about yourself and giving a phone number.

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Wanted: **Cape cobra information**. I am seeking data for captive breedings of *Naja nivea*. My primary purpose is to establish the number of eggs laid (any double clutches?) and most important the color of the neonates immediately after emergence. Contact: Karl Switak at khs@sonic.net.

Line ads in this publication are run free for CHS members — \$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: MADadder0@aol.com.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, May 26, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Jack Schoenfelder**, Chair of the Department of Business Technologies at Ivy Tech State College in Valparaiso, Indiana, and former CHS President, will present a slide program about the use of herps in advertising.

Our always popular annual **Show & Tell** meeting will take place June 30. All members are encouraged to bring a favorite animal and to be prepared to come up on stage and tell us something about the animals they have brought.

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago's newest museum — the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the June 18 board meeting, to be held at the North Park Village Administration Building, 5801 North Pulaski Road, Chicago. To get there take the Edens Expressway, I-94, and exit at Peterson eastbound. Go a mile east to Pulaski, turn right and go south to the first traffic light. Turn left at the light into the North Park Village complex. At the entrance is a stop sign and a guardhouse. When you come to a second stop sign, the administration building is the large building ahead and to your left. There is a free parking lot behind the building.

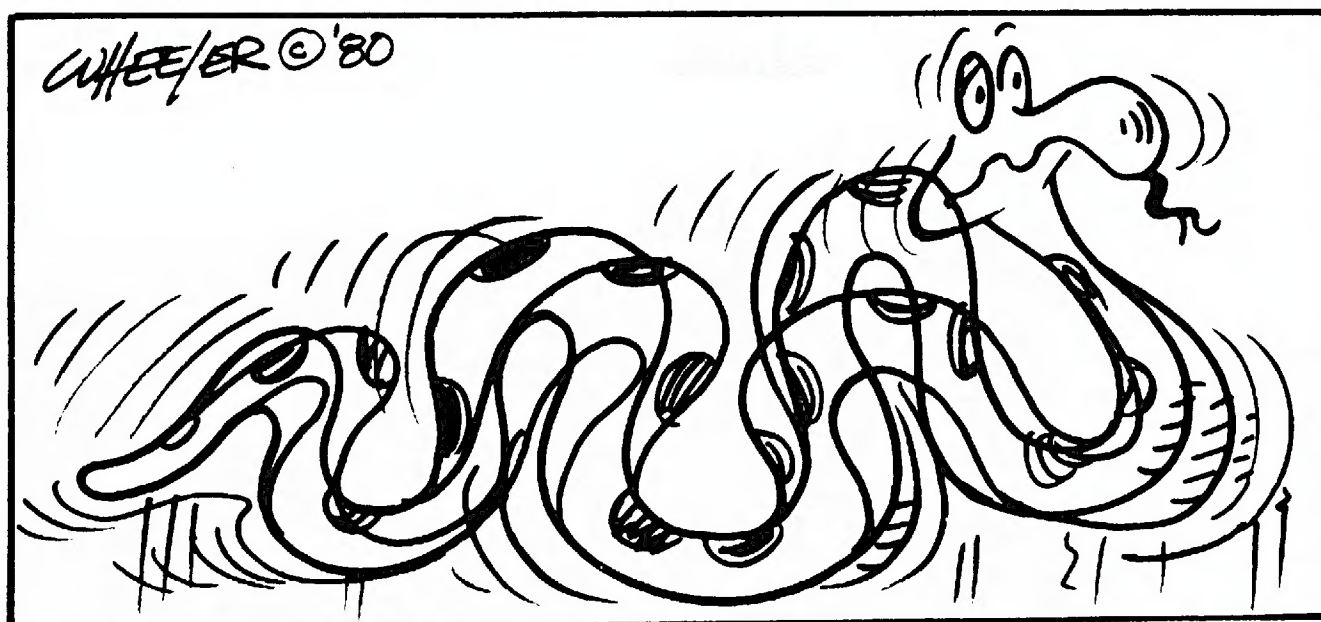
The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: <http://www.geocities.com/~chicagoturtle>.

HERP OF THE MONTH

Each monthly meeting will showcase a different herp. CHS members are urged to bring one specimen of the "Herp of the Month" to be judged against the entries from other CHS members. Prizes will be awarded to the top three winners as follows: 1st place—6 raffle tickets at next meeting; 2nd place—4 raffle tickets at next meeting; 3rd place—2 raffle tickets at next meeting. For May you are invited to bring any amphibians or reptiles native to the island of Madagascar.

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